

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1532.—VOL. XXXIV.

LONDON, SATURDAY, DECEMBER 31, 1864.

(STAMPED.....SIXPENCE.
(UNSTAMPED.....FIVEPENCE.

MR. JAMES CROFTS, SHAREBROKER,

No. 1, FINCH LANE, CORNHILL.
(Established 32 years.)
Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES.
Holders of mining shares DIFFICULT OF SALE in the OPEN MARKET may find purchasers by negotiation, through Mr. Crofts's agency. Also, parties requiring ADVICE how to act as to the DISPOSAL, or ABANDONMENT, of doubtful mining stocks may profitably avail of Mr. Crofts's long experience on the market in all cases of doubt or difficulty.
FOR SALE, AT LOWEST MARKET PRICES (net):—15 Crane, £3; 40 South Darren, £1s. 1 East Basset, £2 1/2; 40 North Chiverton, 2 1/2; 20 Frank Mills, £2 1/2; 20 West Chiverton, £2 1/2; 20 East Russell, £2 1/2 (call paid); 25 East Vor, £2 1/2; 20 West Walsley, £2 1/2; 20 North Trestlerby, £1s. 6d.; 75 Wheel Hartley, 2s. 6d.
* * * BARGAINS.—20 shares Great Caradon and 10 West Exma (Cuckfield) for £11 1/2 net, all calls paid; 150 Great Northern Copper (30s. paid), at 1s. per share net.
* * * Advice given on Stock Exchange investments of all descriptions.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET,

LONDON, E.C.
JAMES LANE has FOR SALE at net prices:—8 Basset and Grylls; 3 Buller, £11 1/2; 50 Bedol-Aur, 20; 50 Bryntall, £2 1/2; 50 Crebor, £2 1/2; 20 Crenver and Abraham, 10s. 6d.; 50 Calstock Consols, 8s.; 20 Carn Camborne, 27s. 6d.; 20 East Lovell; 20 East Rosewarne, £3; 20 East Russell, £2 1/2; 10 East Chiverton, 30s.; 20 Great Wheel Busy, £1 1/2; 20 Hallenbeagle, £2 1/2; 20 Lady Bertha, 20; 20 Maudlin, £2; 20 North Trestlerby, £2 1/2; 20 North Basset, 30s.; 10 North Gribbler, £2 1/2; 50 North Devon, £2s.; 50 New Wheel Martha, £1 1/2; 100 Okei Tor; 50 South Grenville, 8s.; and 100 Tin Hill, £1 10s.

MR. WILLIAM LELEAN BUYS AND SELLS all descriptions of

ENGLISH AND FOREIGN STOCKS AND SHARES, INSPECTS MINES, and TRANSACTS all the usual BUSINESS of a STOCK and SHAREDEALER. Parties may rely upon him for sound advice and punctuality in all his engagements.
Mr. Lelean has FOR SALE:—10 Maudlin, 10 Great Laxey, 2 Providence, 30 Bedford United, 20 Crenver Wheel Abraham, 20 North Chiverton, 10 South Wheel Basset, 20 South Darren, 20 East Rosewarne, 20 East Laxey, 20 Great South Chiverton, 10 East Trestlerby, 10 Trelon Consols, 20 Rosewarne Consols, 10 Crane, 10 Wheel Curtis, 100 Great Caradon, 20 East Chiverton, 5 Darren; 30 East Providence, £2 1/2; and 250 North Miners, 2s. 6d.
I refer my correspondents to my Address to my Friends, in this day's Journal, p. 914.
Bankers: Messrs. Roberts, Lubbock, and Co.
Offices, 11, Royal Exchange, London, E.C.

JOHN B. REYNOLDS, 2, HATTON COURT,

THREADNEEDLE STREET, LONDON, E.C.
Recommends for investment East Wheel Vor, Cook's Kitchen, and Stray Park shares, with several others, many of which are not now dealt in, but which have been very often in great demand, and which will be in considerable request again.

WILLIAM WARD,

29, THREADNEEDLE STREET, LONDON, E.C.

MR. WM. BIRDSEY, MINE AND SHAREBROKER,

No. 6, NEW BROAD STREET, LONDON, E.C.

MR. THOS. THOMPSON, MINING OFFICES,

12, OLD JEWRY CHAMBERS, LONDON, E.C.

WILLIAM SEWARD,

19, THROGMORTON STREET, LONDON, E.C.

JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C.

SHARES IN MINES BOUGHT AND SOLD on commission, at 1 1/4 per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,

LONDON, E.C., has FOR SALE:—
Buller, £11 1/2. East Lovell, £13 1/2. Great Laxey, £13 1/2.
Chiverton, £2 1/2. East Rosewarne, £2 1/2. Great Busy, 27s. 6d.
Clitters, £2 1/2. East Vor, £2 1/2. Hallenbeagle, £2 1/2.
Camborne Vein, £2 1/2. East Grenville, £2 1/2. Lady Bertha, 10s.
Crenver & Abraham, par. East Caradon, £15. Marke Valley, £2 1/2.
Drake Walls, 17s. 6d. Hington, £3 16s. 3d. St. Day United, 25s. 6d.
East Basset, £2 1/2. Kelly Bray, 10s. South Tolgus, £2 1/2.
East Carn Brea, £2 1/2. Great South Tolgus, £2 1/2. Wheel Hope, 10s.
East Russell, £2 1/2. Great Wheel Vor, £2 1/2. Wheel Crebor, £2.
And is a BUYER of:— West Caradon, £2 1/2. East Vor, £2.
South Condurrow, 28s. Frank Mills, 14s. 6d.
West Vor, 20s. Kelly Bray, 14s. 6d.
T. ROSEWARNE is a SELLER of the following shares, for time on, at prices below present market value:—
Glasgow Caradon. East Russell.
East Basset. West Chiverton.
December 30, 1864. Bankers: Bank of London.

JAMES HUME, 74, OLD BROAD STREET, LONDON, E.C.,

AND MINING EXCHANGE.
J. Hume's "Circular" for November is now ready, and contains most valuable information on some of the leading mines likely to have a great rise. Subscription 6s. per annum. 6d. per copy.
Business transacted at lowest net prices.
Bankers: London Joint-Stock Bank.

JOSEPH J. REYNOLDS, JUN.,

37, OLD BROAD STREET, LONDON, E.C.
Mr. Reynolds recommends for immediate purchase shares in Rosewarne and East Ellen Mines, being confident that a rise in price equal to cent. per cent. will soon take place. Shares can now be obtained at about 1 1/2 per share in each mine.

MR. F. W. MANSELL begs to inform his friends that he has

REMOVED from 75, Old Broad-street, to 26, THROGMORTON STREET, where all communications should be addressed.

MR. GEORGE BATTERS strongly recommends his friends to buy

West Chiverton, Chiverton, Herodaford, South Caradon, Devon Great Consols, Great Wheel Vor, Westworth Consols, and Sittney Wheel Metal for investment. These shares will pay good interest for money at present quotations.
Advertisements have recently been inserted in the columns of the MINING JOURNAL by dealers who, having sold shares for forward delivery, endeavour to frighten timid holders in order to possess themselves of their shares to fulfil their contracts; this system has been adopted particularly against Great Wheel Vor, West Chiverton, and Chiverton shares, and I caution my friends against parting with their property, or giving credence to the unfounded assertions of interested parties.
76, Old Broad-street, London, E.C.

MR. C. POWELL, MINE SHAREDEALER,

78, OLD BROAD STREET, LONDON, E.C.
(Member of the Mining Exchange.)
Mr. Powell begs to inform his friends and the public that he continues to TRANSACT BUSINESS, as BUYER or SELLER of SHARES in MINES, at close net prices, either for cash or the fortnightly settlement.
The following shares are recommended for immediate purchase:—Billins, Bryn Gwlog, Clifford Amalgamated, Chiverton, Chiverton Moor, East Carn Brea, East Wheel Vor, East Wheel Lovell, Frontino and Bolivia, Great Laxey, Great Wheel Vor, Hallenbeagle, Nanglies, New Wheel Lovell, North Chiverton, North Wheel Croft, Sittney Wheel Metal, Santa Barbara, South Darren, South Lovell, Tincroft, West Chiverton, West Wheel Vor, Wheel Basset, Wheel Kitty (St. Agnes), and Wheel Seton.
Dec. 30, 1864. Bankers: City Bank, Finch-lane.

HARRIS AND CO., STOCK AND SHAREBROKERS,

AND FINANCIAL AGENTS,
15, GEORGE STREET, MANSION HOUSE, LONDON, E.C.

FRANK MILLS.—MESSRS. HARVEY AND CO. are BUYERS

of these shares at £6 1/2, and SELLERS at £6 1/2, net cash.—North of England Mining and Engineering Office, Clarence Chambers, Manchester.

MR. GEORGE BUDGE, SHAREDEALER, No. 4, ROYAL

EXCHANGE BUILDINGS, LONDON, E.C. (Established 17 years), has FOR SALE at net prices:—50 Maudlin; 1 Wheel Seton, £300; 10 West Chiverton, £27; 20 East Vor, £2 1/2; 25 Great South Tolgus, £2 1/2; 100 Welsh Gold, 18s.; 50 Frontino and Bolivia, 22s. 6d.; 100 Nova Scotia, 22s. 6d.; 120 Bette Hill, 6s. 6d.; 50 Treloweth; 50 Merilyn, 3s.; 100 Anglo-Brasillan, 6s. 6d.; 50 Kelly Bray, 18s. 6d.; 60 Treloweth; 25 Santa Barbara, £2; 30 East Russell, £2 1/2; 100 Santa Barbara, 9s.; 125 Hawkmoor, 2s.; 2 Miners, £300; 70 Dale, 10s.; 75 North Miners (Preference), 2s.; 3 East Basset; 200 Don Pedro; 2 West Sharp Tor, £60; 100 Mollard, 4s. 6d.; 50 Wheel Hope; 25 Hington Down; 60 Gawton, 7s. 6d.; 100 Redmoor, 6s.; 200 Hlogan, 7s.; 60 Worthing; 150 Prince of Wales; 10 Tincroft; 25 Wheel Grenville, £4 1/2; 50 North Devon; 100 North Robert; 30 Crebor, £2 1/2; 25 North Shepherds; 5 South Croft; 2 Providence.

STOCK AND SHAREDEALER.—MR. PETER WATSON,

ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.
Twenty years' experience.
(Two in Cornwall and Eighteen in London.)
Bankers: The Union Bank of London, and the Alliance Bank.

Every information can be obtained on personal application, or by letter, as to purchases and sales of Mine, Railway, Bank, and other Shares and Stocks, and the best investment for capital.
From the close proximity of his offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality.

INVESTMENT FOR CAPITAL.—For a good investment and

a great rise in the present price of shares, Mr. PETER WATSON is prepared to recommend four mines, which are paying good dividends (every two months or quarterly), and eight progressive mines, requiring but a further small outlay, which, from the present position and future excellent prospects, he feels confidence in recommending at the present greatly depressed prices. The above selection of twelve mines present more than the usual chances of success during the next twelve months. This list will be sent on application to all those who desire it, with the respectful solicitation that investors do their business through PETER WATSON, 79, Old Broad-street, London, E.C.
EAST WHEEL VOR.—In my "Weekly Circular," No. 243, of Oct. 7, I stated—"I should recommend my friends to increase their holding at present prices, 8 1/2 to 9 1/2," and in my "Circular," No. 244, of Oct. 14 (four weeks ago) I stated—"The shares this week have been firm at 8 1/2 to 8 3/4, and will, in my opinion, advance considerably," and this week they have advanced to £15 1/2 to £16 1/2. Those who acted upon my advice can now realise a great profit if they so desire.

PETER WATSON'S WEEKLY MINING CIRCULAR AND

SHARE LIST, published every Friday, price 6d. each copy, forwarded on application. This Circular contains weekly important information with respect to all the principal Dividend and Progressive Mines in Devon and Cornwall.
79, Old Broad-street, London, E.C.

WEEKLY MINING CIRCULAR, PUBLISHED BY PETER

WATSON.—The "Weekly Circular" of Friday, the 23rd December, No. 253, Vol. VII., contains important information on several leading Dividend and Progressive Mines. Annual subscription, £1 1s. Single copy, 6d. each.
79, Old Broad-street, London, E.C.

ANNUAL MINING REVIEW FOR 1864, OF CORNISH

AND DEVON MINES.—MR. PETER WATSON'S "WEEKLY MINING CIRCULAR" of the next four or five weeks' numbers will contain his usual Annual Review of Cornish and Devon Dividend and Progressive Mines during the year 1864, with advice as to purchases and sales.
79, Old Broad-street, London, E.C., December 30, 1864.

ANNUAL MINING REVIEW FOR 1864.—

MR. PETER WATSON'S "WEEKLY MINING CIRCULAR" of yesterday (Friday), December 30, No. 254, Vol. VII., contains IMPORTANT INFORMATION in connection with the mining district of the last twelve months, a list of mines in this period that have ceased to pay dividends, and the present dividend mines, with advice as to purchases and sales, &c.—79, Old Broad-street, London, E.C.

EAST WHEEL VOR.—The Truro Correspondent of the MINING

JOURNAL (in the Journal of Nov. 26) in remarking on the district, gives the following extract:—
"The most important virgin ground in the district is the large sett (formerly two setts) now working at EAST WHEEL VOR, comprising nearly the whole of the eastern half of the basin, and occupying precisely the same position, with regard to the granite hill bounding that side, as Great Wheel Vor does to the Tregooning granite. It includes all the lodes of Old Wheel Vor, as well as those of Wheel Metal, and the result of the sound and vigorous working it is now receiving is to be looked for with great interest. This sett has, no doubt, been scratched about and played with for a long time—treated, in fact, as Wheel Metal was until within the last four years—but it has never yet received such handling as could, except by an extraordinary accident, be expected to lead to any useful result. It now, however, seems to be provided not only with a good plant of material, but with an ample supply of capital; and certainly its chances at the present moment are infinitely better than those of Wheel Metal four years ago. If the analogous geological conditions under which the same lodes occur on both sides of the basin forming the Wheel Vor district should lead, as may certainly be fairly expected, to anything like analogous results, then indeed East Vor, containing, as it does, the eastern continuation of the best known productive lodes of the district, has a future before it not easily to be matched. It is to such mines as these—virgin ground well situated—that, in the best interest of Cornwall, the capital and energy of legitimate mining enterprise should be directed. The public cannot go very far wrong in them, for although, of course, they cannot all succeed, yet a sufficient number to give a splendid result, on the whole, have never yet failed to do so."
The shares this week have been in good demand at £2 1/2 to £3, and when these shares advance to £8 or £10 each, probably they will be eagerly sought after by the investing public. Read agent's report among the Mining Correspondence.
79, Old Broad-street, London, E.C.

GREAT WHEEL VOR.—Ever since these shares were at £4 each I

have recommended a purchase. The mine (Wheel Metal part) never was so rich as at present; the different points of operation are worth together over £2000 per fathom! The reserve of tin, as stated by the Chairman at the last meeting, is over £200,000! Over and above what is being taken away, the reserve is increasing at the rate of nearly £100,000 per annum! The last quarterly dividend was 15s. per share, and the time is not far distant when I expect to see it at double this—viz., 30s. per share quarterly. Shareholders and the mining public should remember what the "Old Wheel Vor" mine has returned many years ago—over £2,500,000! and gave enormous profits. This is the richest, best, and safest tin dividend mine in Cornwall for many years to come; and the shares, now at £33 to £34, I expect are long to see at £50 to £55 each, especially as the price of tin is likely to advance early next year. A rise of £13 per ton in black tin would be equivalent to an extra 12 months' dividend of about 20s. per share.—PETER WATSON, Stock and Share Dealer, 79, Old Broad-street, London.
PETER WATSON is a buyer at £29 1/2; seller at £33 1/2.

JAMES HERRON has FOR SALE the following SHARES, at

the prices quoted, and FREE OF COMMISSION:—
100 Anglo-Brasillan, 5s. 3d. 20 Gawton.
50 Bedol-Aur, 8s. 6d. 1 Great West Clifford.
50 Bottle Hill, 1s. 6d. 10 Great Laxey.
5 Bryn Gwlog. 50 St. North Chiverton.
10 Bryntall, £2 1/2. 20 Great Busy, 27s.
2 Buller. 100 Gurlyn (offer wanted).
5 Clifford Amal., £31 13 9 20 Hallenbeagle, £2 1/2.
1 Carpoll, £37 1/2. 20 Haven (fully paid).
5 Crane. 25 Hington Down.
5 Crenvermlog, 1s. 6d. 20 Hlogan, 6d.
2 Cwm Ebor, £33. 30 Kelly Bray.
30 Carn Camborne. 10 Kitty (St. Agnes), £5 2 1/2.
30 Chiverton Moor, £2 8s. 9d. 50 Lady Bertha.
20 Central Miners. 20 Long Rake, 27s.
10 Cape Copper, £11 1/2. 50 Mariquita, 15s.
5 Crebor, £27 1/2. 10 Maudlin.
5 Crenver, £5 17s. 6d. 1 Miners.
10 Camborne Vein, £3 8 9 50 New Birch and Vithier, £2 3s. 9d.
10 Cliljah & Went, £3 8 9 20 North Basset, 23s.
50 Drake Walls, 14s. 9d. 10 North Pool, 27s.
2 East Basset, £48 10s. 3d. 20 North Devon.
10 East Carn Brea, £2 1/2. 2 Nanglies, £21 7s. 6d.
10 East Lovell, £5 8s. 9d. 50 North Wh. Croft, £2 1/2.
10 E. Rosewarne, £2 11 3 50 North Miners, 2s. 6d.
21 East Vor, £1 18s. 9d. 50 North Martha, 22s. 6d.
50 East Grenville, £1 3s. 50 New Rosewarne, £17 1/2.
30 East Laxey. 20 New Treleigh, 5s.
5 East Caradon, £15 1/2. 1 North Roskear, £18 1/2.
50 East Clogan, 2s. 20 North Shepherds.
30 Frank Mills. 100 North Robert.
20 Frontino and Bolivia. 100 Nant-y-Iago, 2s. 9d.
20 Fortuna, £3 8s. 9d. 20 North Trestlerby, 41s. 9d.
20 Great So. Tolgus, 57s. 9d. 20 North Chiverton, £2 1/2.
50 St. Northern Copper, 1s. 6d. 50 Okei Tor.
(call paid). 3 Penhallow Moor, £8.
20 Great Retallack, 1s. 9d. 20 Prosper United, £2 18s.
5 St. Wh. Vor, £31 18s. 9d. 50 Port Phillip.
And is a BUYER of 20 South Lovell, 1 Miners, 3 East Darren, 5 Tincroft, 2 Trelawny, 1 Mary Ann, 5 Nanglies, and 1 West Sharp Tor.
2, Adam's-court, Old Broad-street, December 30, 1864.

MR. EDWARD COOKE, MINING SHAREDEALER,

2, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
(Member of the Mining Exchange.)
Mr. EDWARD COOKE has removed to the above address, where all communications on matters relating to business will meet with his usual attention.
Dec. 30, 1864. Bankers: Alliance Bank, Lothbury.

MR. T. P. THOMAS, GENERAL SHAREBROKER,

AND AUCTIONEER FOR THE SALE OF MINING, RAILWAY, AND OTHER SHARES, STOCKS, BONDS, DEBENTURES, And all descriptions of Public Securities.
No. 6, NEW BROAD STREET, LONDON, E.C.
Shares bought and sold on the usual commission.
Terms for sale of shares by auction furnished on application.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL

MINING SHAREDEALER, 37, OLD BROAD STREET, LONDON, E.C.

MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE,

LONDON, E.C., has the following SHARES FOR SALE, free of commission:—
25 Wheel Grenville, £2 1/2. 50 West Maria and Fortes. 30 Lady Bertha, 12s. 6d.
20 Frank Mills, £2 1/2. 100 Follard, 8d.
15 Ede Russell, £2 1/2. 10 Wh. Kitty (St. Agnes), £2 1/2.
20 South Lovell, £2 1/2. £2 3s. 9d. 25 Great Wh. Busy, £1 1/2.
25 Torbay Hematite Iron, 90 Prince of Wales, 2s. 3d. 50 West Wh. Vor, 21s. 6d.
£4 1/2. 50 N. Wh. Martha, 23s. 6d. 25 North Trestlerby, £2 1/2.
50 New Birch & Vithier, 50 Vale of Towry, 4s. 2 Bryn Gwlog, £16 1/2.
£2 1/2. 20 North Miners, 2s. 9d. 45 Wheel Crebor, 40s. 3d.
10 Great Laxey, £18 1/2. 20 Marke Valley, £2. 50 Grylls Wheel Florence, 25s.
5 Great Wh. Vor, £32 1/2. 20 East Caradon, £15. 10 N. Rosewarne, £2.
20 East Grenv., £16s. 3d. 25 Hington Down, £2 1/2. 5 West Caradon, £2 1/2.
10 East Lovell, £13 1/2. 5 Clifford, £32 1/2.
25 St. So. Tolgus, £3 6 3 5 Basset & Grylls, £10 1/2.
BUYER of Marke Valley, £2 1/2.
Parties of respectability can have transfers registered into their names previous to payment.
Bankers: London and County Bank.

HENRY GOULD SHARP,

STOCK AND SHAREDEALER, 32, POULTRY, LONDON, E.C.,
Member of the Mining Exchange (Established 12 years.)
Is in a position to give SOUND ADVICE and RELIABLE INFORMATION as to the SAFEST and BEST PAYING INVESTMENTS of the day, both in RAILWAY, BANKING, MINING, INSURANCE, DOCK, GAS, WATER, FINANCIAL, and OTHER MISCELLANEOUS SHARES.
Bankers: London and Westminster Bank, Lothbury, London, E.C.

SAFE INVESTMENTS FOR CAPITAL,

PAYING EIGHT TO TWENTY PER CENT. upon present price of shares:—
CLIFFORD AMALGAMATED (COPPER).—In 3900 shares, £20 paid, price £22 per share. These shares continue in demand, and should be bought at once. They are a safe and good paying investment. The mines are looking splendid. Their sales of copper ore are enormous, over 1300 tons bi-monthly. Upwards of £1,100,000 has already been paid in dividends. They pay £2 1/2 annually, which will increase, being 11 1/2 per cent. upon the present price. The lodes of these celebrated mines pass into Nanglies.
NANGLIES (TIN AND COPPER).—In 1024 shares, £19 paid, price £22 per share. The mine continues to look well, and very important improvements are expected. The 107 west is producing more ore; a branch of good ore has come in the north part of the end. The east is the 107 east has improved; both these are most important features. They will sell 102 tons of copper ore next Thursday; these sales will gradually increase. The stopes and tribute pitches are producing fair quantities of ore. Having the Clifford Amalgamated lodes, and adjoining those celebrated mines, Nanglies "cannot" prove a failure. It is the best young mine in the county. I strongly advise the immediate purchase of shares. They are a sound investment, and will prove one of the most profitable and best paying in Cornwall.
GREAT WHEEL VOR (TIN).—In 5908 shares, £40 paid, price £32 per share. This mine never looked better, and but for the low price of tin shares would be £40. They have been in demand, and are "beared" to a considerable extent. They pay £3 yearly in dividends, being 9 1/2 per cent. upon present price. The shares worth buying in this district are East Vor, the adjoining mine.
EAST WHEEL VOR (TIN).—In 6000 shares, £5 paid, price £2s. 2s. 6d. per share. These shares have been in great demand, and are being bought up for investment; they are certain to rise in price. There is a further improvement here, and further important improvements will shortly take place. I think there is every prospect of this mine proving very rich and profitable. Having £3000 in hand for working expenses, no calls are likely to be required.
DEVON GREAT CONSOLS (COPPER).—In 1024 shares, £1 paid, price £20 per share. This wonderful mine continues very rich, and shares are firmer than Bank stock. There are several buyers, but sellers are difficult to find. Upon an outlay of £1024, nearly £1,000,000 has been paid in dividends. They pay £60 per share yearly upon present price, being 6000 per cent. upon the original outlay. Who can find a bank, financial company, or any other investment so equal to this?
SOUTH CARADON (COPPER).—In 512 shares, £1 5s. paid, price £240 per share. This mine is immensely rich, and the copper ore is of very high percentage. Shares are a sound investment; they pay £42 yearly, being about 8 per cent. upon present outlay. £255,264 has been given in dividends, upon an outlay of £640 only.
EAST CARADON (COPPER).—In 6144 shares, £2 14s. 6d. paid, price £16 per share. These shares have dropped from £55, at which price they were much too high. They are now worth buying. The last quarterly dividend was 17s. per share, being 21 1/2 per cent. upon present price. £74,342 has been paid in dividends the past three years. Important improvements are shortly expected, which will cause a considerable rise in price. Shares are heavily "beared," and strong attempts made by the "bears" to knock down the price. Reports say the lode has failed, but this is not at all likely, as this mine closely adjoins South Caradon, and having the same lodes they will continue rich and profitable far below the 80 fm. level.
WHEEL GRYLLS (TIN).—In 1024 shares, £5 14s. paid, price £1 per share. This mine is nearly paying costs. Last year shares were £23 each, and paying dividends; surely they are well worth buying now at £4, with excellent prospects, and all their machinery.
NORTH WHEEL BASSSET (TIN AND COPPER).—In 6000 shares, £4 8s. paid, price £1 1/2 per share. The prospects are good; an improvement would put them to £3 in a few days. Shares were £44 some 12 years since. £88,200 has been paid in dividends. They are certain to rise 100 per cent. within six months.
GREAT WHEEL LAXEY (LEAD).—In 12,600 shares, £4 paid, price £19 per share. This mine has greatly improved, and likely to continue a lasting dividend-paying property. Shares have advanced from £4 1/2 to present price since January last. Dividends are payable quarterly, 10s. per share, being 11 per cent. upon present price.
NORTH CHIVERTON (LEAD).—In 6000 shares, £1 paid, price £2 1/2 per share. The prospects held out here are first-rate; the mine is nearly paying cost. Their last sale of ore was 7 tons of lead, at 21l. per ton, and 55 tons of blende, at £3 13s. per ton. All their machinery is paid for, and in good working order.
PROVIDENCE (TIN).—In 1120 shares, £10 6s. 7d. paid, price £26 per share. This mine has given £31,160 in dividends. They pay £1 per share quarterly, which is 10 1/2 per cent. upon present price of shares. The mine is looking well. A rise in tin would put shares to £45 again, and increase their quarterly dividends.
EAST PROVIDENCE (TIN).—In 3986 shares, £4 9s. 8d. paid, price £2 10s. per share. This mine adjoins and embraces the same lodes as Providence; it cannot, therefore, fail to become very rich and profitable. A few months since shares were readily saleable at £4 1/2 to £5; there has been no just cause for the fall in price, and holders are buying to average. Shares should now be bought; they are a capital investment at the present low figure. The reserves of tin discovered are worth 8000l., and will be taken away at a profit immediately the steam-stamps are erected. The mine has further improved. The lode in the 50 cross-out, which was only "tiny" last week, is now worth £3 per fm., and likely to improve.
LADY BERTHA (COPPER).—In 6000 shares, £2 6s. 6d. paid, price 15s. per share. This mine has considerably improved. The lode in the bottom of the new eastern shaft is worth 20l. per fathom; this is an important improvement. I recommend these shares for a certain rise of 100 per cent. in price within three or four months.
KELLY BRAY (COPPER).—In 6000 shares, £5 2s. 6d. paid, price 10s. per share. The late improvements in this mine will show a considerable profit on the past three months' working. The shares are safe to see 30s. in a few months; I, therefore, advise the immediate purchase.
WEST WHEEL SETON (COPPER).—In 400 shares, £47 10s. paid, price £210 per share. These shares pay £4 every two months, which is 11 1/2 per cent. upon present outlay. £168,400 has been given in dividends. They are a good and safe investment, and certain to rise in price.
WHEEL TRELAWNY (LEAD).—In 1040 shares, £5 17s. paid, price £18 per share. This mine has given in dividends £22,910. They pay 12s. 6d. per share quarterly, being about 14 per cent. upon present price. Since the change in the London management, shares have dropped £2 per share.
WHEEL SETON (TIN AND COPPER).—In 397 shares, £58 10s. paid, price £203 10s. This mine is looking well, and holds out prospects of great improvements. Dividends are paid every two months £4 per share, or £24 annually, being 12 per cent. upon present outlay. They are a safe investment, and will rise in price. £74,349 has been paid in profits.
The other mines I recommend for an advance in price (several of which will eventually become first-class dividend-paying properties, and shares realise ten times their present value, some of which are now paying costs and others working at a profit) are: South Tolgus, £30; Great South Tolgus, 3 1/2; South Frances, 27; West Caradon, 8 1/2; North Trestlerby, 2 1/2; Long Rake, 1 1/2; Crane, 3 1/2; Wheel Agar, 1 1/2; Garlidina United; Great Caradon; South Condurrow, 1 1/2; Wheel Union, 10s.; East Carn Brea, 6 1/2; North Jane, 1 1/2; Great Wheel Fortune, 5 1/2; Wheel Crebor, 1 1/2; Wheel Harriett, 1 1/2; East Wheel Russell, 5 1/2; St. Day United, 1 1/2, &c.
P.S.—Reports of the above will be found in the columns of this Journal.
HENRY GOULD SHARP, 32, POULTRY, LONDON, E.C.
Member of the Mining Exchange (Established 12 years.)

HENRY GOULD SHARP'S

RAILWAY, BANKING, MINING, AND INVESTMENT CIRCULAR (post free) should be consulted by the public before investing. Dividends can be secured from 10 to 20 per cent. upon the money invested. It is a safe guide, containing reliable information and sound advice to capitalists.
Offices, 32, Poultry London, E.C. (Established 12 years.)

Original Correspondence.

NOTES OF A COLLIER'S VISIT TO A CORNISH COPPER MINE—No. III.

SIR,—The following remarks occur to me on the points under notice:—
CORNISH PUMPING ENGINE.—Without doubt the Cornish engine and pumping arrangements are superior to any other in the United Kingdom, and I have seen every style in it. I have not a single remark to make upon it, but advise anyone in want of a pumping engine to go to Cornwall, get a Cornish engine, plungers, boilers, and fit them up by Cornishmen, and work them by Cornish enginesmen. I have seen attempts made to make them elsewhere, and all have been great failures, which I attribute to the tendency of a "native" to adopt some of his own hobbies. The modes of balancing, and of working expansively, are as near perfection as we shall get; and the systematised training of men,—at low wages, too, only 65s. per month—is worthy of imitation. The great points of the Cornish system, as already stated, are slow firing; careful clothing of engines, steam pipes, and boilers; expansion and condensation of steam; forcing sets and large waterways; great strength (for steadiness) of rods; and accurate balancing, which the use of balance-bobs enables them to do so simply. Too little attention is paid to these points about collieries, and especially to size of rods and balancing, and it appears to me that the adoption of heavier rods, counterbalanced with balance-beams, would add much to the steadiness of our direct pumping-engines. In "Ball" engines, or those where the cylinder stands directly over the pit, I believe the use of balance-beams would enable the steam to be used expansively, which is never done now, as far as I have observed. I was informed that this description of engine had been abandoned in Cornish mines for 50 years, in favour of the beam-engine now in use. Our best bell-crank arrangements, with rotary engines, consume at least four times the fuel of the ordinary Cornish engine. For example, the Cornish engine will do the work of an ordinary 20-in. cylinder high-pressure pit engine, working 24 4-ft. strokes for 24 hours, on 2 tons of coals.

FLAT-RODS.—The use of large wheels upon the flat-rods is good; wheels are frequently adopted here, but they are too small.

WINDING.—The winding-engine in this particular mine was a very old one; but generally the winding arrangements are not up to those in the coal districts. The apparatus for drawing the ore up the pit, and the kibble, is exceedingly rude. I cannot see anything to prevent the adoption of similar arrangements to those in use in edge coal seams, and I am glad to notice (9709 of Kinnaird's Committee) that cages and ropes have been successfully introduced at South Wheal Frances.

CHANGING-HOUSES.—I think this is an admirable institution, and seems fairly rooted in the Cornish mining districts. They have often been tried in coal mining, and I have one place in view now where it is carried on, but not very successfully, although the proprietor spares no expense. The men seem to think shame of their clothes—that is, they do not like to expose them to prying eyes in a changing-house. In the instance I mention a woman keeps the place (there are several separate rooms) clean, and it strikes me that the fact of a man looking after the place might make it more workable, if one might be ungallant enough to hint that he might be less curious than a woman. I commend the adoption of the changing-house seriously to all coalmasters.

SHIFTS.—The 8-hours shift seems to be universal in Cornwall: the exception of the enginesmen is odd, the idea of men being 12 hours on and 24 hours off is very curious. The captain seemed surprised when I told that our enginesmen were 12 hours on every day, sometimes more. He remarked he should not like to work half his time.

CANDLES.—I observe in the Commissioners' evidence the cost of candles given at 1s. 4d. to 1s. 6d. a week. Herewith I send you a common miners' lamp for burning tallow. I have also sent one to the Truro Mining School. This lamp burns a whole day for 1½d. or 2d., and produces as little smoke as a candle. The lamp costs 6d., and will last a lifetime.

LADDERS.—I think the ladders are not a bad idea, and especially the ladder down the engine-pit, which admits of the 8-hourly inspection of the pit-work. In my opinion the ladders of the form described, with iron steps, are preferable to the traps put into coal pits: the men get hold with their hands as well as feet; but it is a needless waste of labour to compel men to ascend 100 or 200 fms. by means of ladders, when they could be so easily raised by machinery, and with greater safety. In the collieries we could not get men to ascend 20 fms. without grumbling, and within the last month some colliers refused to descend a ladder of 20 fms. to their work in the mornings because of the danger, and the master put on a man at the engine-house to lower them down.

CLUBS, OR ACCIDENT FUNDS.—These are another old-fashioned institution in Cornwall, which it might be well to copy in our collieries, by means of which every man who meets with an accident gets an aliment of 6s. to 8s. per week while unable to follow his employment. It is kept up by a deduction of 6d. to 8d. a month from the men's pay (in some cases 4d. to 6d. per pound). The clubs are entirely in the hands of the mine-owners, who do not seem to admit of any control from the subscribers. The constitution of these clubs may be faulty, but they are worthy of imitation. What a benefit such a club would be if they were general among our colliers.

VENTILATION.—The ventilation of Cornish mines cannot be otherwise than bad. Only fancy the state of the ventilation in a place where the air is supplied by a pipe of 4 inches square, 250 yards long; the rate of the current about 80 feet per minute! Only 9 cubic feet of air per minute in a place where the current ought to have been 1000 feet per minute at least; and yet tubes of this size seem to be generally used for conveying air in these mines. A Cornish mine is perfectly comparable with a coal mine as regards ventilation; and we have coal mines quite as steep—indeed, steeper—than any of the mines I was in; and yet the law says—"An adequate amount of ventilation shall be constantly produced in all coal mines and collieries, to dilute and render harmless noxious gases, to such an extent that the working places of the pit's levels and workings of every such colliery and mine, and the travelling roads to and from such working places, shall, under ordinary circumstances, be in a fit state for working and passing therein." There is no difficulty in complying with this, and in sending a current of 6000 or 8000 cubic feet per minute into a place similar to a range of workings on the lode of a Cornish mine. All that is needed is systematically to send a current of air down to the bottom of the mine, and guarding it by proper stoppings, doors, and brattice, into the lowest level, ascending upwards by the winze nearest the face to the top level, and by it ascending to the upcast pit. The main air-ways should have an area of 18 or 20 square feet; and the space behind the brattice, which is only temporary, and is thrown off when another winze is holed, should not be less than 10 feet. The brattice into the close end might be taken in along either one side, or along the upper part of the level incline ends—say, 2½ feet from the roof—which would give an area of 10 feet, and still leave a passage 4 feet high for the transit of the ore while the brattice was in. A furnace, fan, pump, or steam-jet, must be used to create a current, but, I believe, if air-courses of the size indicated were maintained, and the top of the upcast 50 or 100 feet above the level of the downcast, artificial aid will seldom be needed. If it were needed, one of Struvé's machines could easily be adopted—similar in principle to the machines that are spoken of in the evidence (2576), drawing 200 cubic ft. per minute, but much larger, and capable of discharging 6000 or 8000 cubic feet per minute.

I see no reason why the law enforcing "adequate ventilation" in coal mines should not apply to metalliferous mines also. The facilities for ventilation of the latter are much greater than in coal mines, and it would be true economy to introduce good air. Efficient ventilation would add greatly to the comfort of the men, and they would do a greater amount of work. Miners' disease would be greatly diminished, if not altogether unknown. I know a colliery district where, 30 years ago, "miners' disease" was very prevalent. The seam of coal was from 24 to 30 in. thick, and it was necessary to cut down stone in the roads to let the trams get in. Not the slightest attention was paid to ventilation, and if there were two pits the air played between the two, but was never led into the workings; and, as a good deal of carbonic acid gas exuded out of the strata, the workings were in a dreadful state for want of fresh air—so much so that for weeks in the summer months, the works were idle. All the workmen suffered, but the stonemen, or those who were engaged in cutting down the roof, suffered most, owing to the dust and the powder-smoke, which could not get away from them; and these men were speedily "cut in" the wind, and were unfit for a hard day's work at 40; they almost invariably died of consumption, or miners' disease, brought on by working in this atmosphere. About 30 years ago a change in the ownership and direction of the collieries took place; the pits were ventilated in accordance with modern

practice, and from 10,000 to 12,000 cubic feet of air sent into the workings per minute, and the result at once told upon the community; the men worked more comfortably, and the young men grew up without suffering from shortness of breath. The pits were never idle for want of air, and now, the old men having died off, miners' disease is unknown, and the men who work stonework are not distinguished by ill-health more than the other workmen. The same seam, at the same depth, is still working, and so are all the circumstances, except the ventilation; and this leaves no doubt on my mind that the Cornish miners' disease must be very much, if not entirely, due to working in powder-smoke in badly ventilated mines.

GENERAL OBSERVATIONS.—Independently of the first general rule of the Mines Inspection Act (23 and 24 Vict., cap. 151), I think most of the general rules, and, indeed, the whole Act, is applicable to Cornish mines. I would advise the Cornish adventurers and mine agents to give it their consideration. It appears to me that the Commissioners have established the existence of a defective state of matters, and that there is great need for improvement. It is satisfactory to know there is a remedy, and that its application is effective and inexpensive, and the sooner the adventurers and agents see to it the better. Government mine inspection has done good in the coal mines, and in nothing more than in establishing a uniformity of rules and regulations, and in disseminating a knowledge of the most improved modes of conducting operations; but I certainly think if this can be done without Government interference so much the better. After all, there is something which it is difficult to reconcile with British freedom in commercial transactions in the Government interference, and I daresay it requires considerable tact and discrimination, as well as forbearance, in the Government Inspector, to prevent the appearance of official interference, and there is often the idea that it does "crop up." The Cornish adventurers and engineers have already shown what can be done, by the publication of the "Cornish Engine Circular," where a voluntary monthly inspection of the machinery takes place, and the results shown. Let me respectfully recommend them to adopt a similar course with the other operations, regarding the comfort of the men; and I would suggest, as a beginning, that the agents should add to the weekly reports which appear in your Journal a statement as to the ventilation of the mine, for instance this—Ventilation (say) 5000 cubic feet per minute; air in all places good. Unless something is done Government will very likely interfere, and then, perhaps, in a less agreeable way.

P.S.—I think the "Cornish Engine Circular" an admirable institution, and worthy of being adopted in our collieries. I am informed, and can readily believe, that it has helped very much to the improved results got by the Cornish engine.

A GRAND REVOLUTION AND NEW ERA IN MINING.

SIR,—The enormous outlay which attends the opening and working of mines in districts where the strata are, as in Cornwall, of an exceedingly hard nature is due mainly to the slow progress which can be made in the sinking of shafts or driving levels or headings through such refractory rocks. Thus 60l. per fathom is not an unusual price for sinking a shaft in hard Cornish stone, and even at this immense cost the progress made is very small. In solid limestone rock a shaft of 9 ft. in diameter can be sunk for 7l. per fathom, and at the rate of 10 fathoms per month, but a shaft in hard capel, or Roskear stone, costs 60l. per fathom, and perhaps not 1 fathom per month can be sunk.

In each case the labour is mainly accomplished by boring holes in the rock and firing them with charges of powder, the explosion of which bursts and breaks up the rock. Now, in limestone these holes can be rapidly bored, because limestone is considerably softer than good hardened steel, and therefore, the steel borer keeps its edge a long time, and cuts the rock keenly and quickly. But capel, or Roskear stone, is nearly, and often quite, as hard as the best hardened cast-steel, hence the edge of the borer is soon worn or beaten up, and in place of cutting the stone keenly it merely bruises it away by degrees, making slow progress through it, and to enable even this to be done the edge of the borer bit has to be made very thick and obtuse, and in a form the least calculated to penetrate rapidly. In boring a hole 8 inches in hard veinstone upwards of 200 borer bits have had to be re-set by the smiths, and the cost of each re-setting or tempering is fairly stated at about 3d. for each bit, taking labour, loss of time, &c., into consideration. Now, if a steel can be produced which when hardened will be as much harder than capel, or Roskear stone, as the best hardened steel at present made is harder than limestone, then by the aid of this steel shafts may be sunk and levels driven in the hardest ground as rapidly and as economically as can at present be effected in ordinary limestone rock.

Such a steel I can produce, and I invite the attention of mining engineers, contractors, and shareholders in mines to this all-important subject. They need only test the steel according to my directions to convince themselves that what I have advanced can be borne out in practice. When used for boring ordinary rocks this steel is all but imperishable in its edge: 200 ft. have been bored with a single borer, in limestone rock, without the bit requiring to be fresh dressed and tempered.

Apart from any interest of my own as an inventor, this matter is one of the deepest national importance, and the adoption of the steel in question in the Cornish mines would enable the miners' interest there to set foreign competition at defiance, and numbers of mines now barely paying cost would at once spring up into dividend mines, whilst a multitude of other mines, now abandoned from the depression of the prices of copper and tin, would immediately be brought into active operation.

The advantages my invention offers to the mine owners may be summed up thus, where hard rock has to be sunk or driven through:—

1. A saving of 75 per cent. on labour cost.
2. A saving of 75 per cent. at least in the time occupied in sinking shafts and driving headings.—*Cheltenham, Dec. 26.* R. MURPHY.

EXCHEQUER BANK NOTES.

SIR,—The property, moveable and fixed, of the nation may be valued at 6,000,000,000l. sterling. If the Consols, and other public funds, were paid off and discharged, if all the mortgages on property, all the cheques and bills of exchange, and all other debts and liabilities were paid off, nothing but actual property would remain. Suppose that everyone was to make a return of what he was worth, adding what was owing to him, and deducting what he owes to others, the gross amount of the national wealth would be 6,800,000,000l. From this the national debt of 800,000,000l. would have to be deducted, which would leave the sum of 6,000,000,000l., as already stated, which will represent the entire wealth of the nation.

It will be observed that in this estimate I have added nothing for floating capital; for if the whole of our liabilities were liquidated or discharged, there would be no floating capital left. I cannot conceive floating capital as having any existence if all our lendings and borrowings were squared off and settled, except in the shape of goods and fixed property, for what would it be? It would be nothing and nowhere. We must, therefore, come to the conclusion that the entire wealth of the nation is represented by its property moveable and fixed. It is the vast amount of our national debt which creates so much floating capital, an evil which it would be difficult to exaggerate. The larger the amount of floating capital the more difficult it is to keep it afloat, and that is the reason why England, which has double the amount of floating capital of any other nation, suffers so much more from monetary panics than any other country. France is not burdened with half the amount of debt that we have; she, consequently, suffers much less from financial convulsions than we do. America will soon have a debt equal to our own, but as she cannot be supposed to have sufficient property to represent it, she is not likely to be able to keep her enormous debt afloat, or pay interest on it for any length of time. Reputation was the end of the assignats of France, and it is all but certain that the greenbacks of America are destined to meet the same fate. The proof that the debt of England is legitimate, and not beyond our means, is that we have always been able to pay interest on it; but that is not likely to be the case in America, which is a young country, and only half developed.

The enormous amount of our floating capital, caused by our large national debt and large increasing trade, calls for a complete reform of our currency laws. We cannot pay off our debt or reduce our trade without injuring ourselves, but we can deprive a necessary evil, a large floating capital, of its sting, by the introduction of a new species of currency (Exchequer Bank Notes), which will give stability and power of expansion to the whole system. I have shown elsewhere how this great and comprehensive reform may be effected, and how a heavy national debt may be made much less burdensome than it has been hitherto.

72, Sloane-street, Dec. 28.

A. ALISON.
 * "Banking and Currency Reform." By A. ALISON, author of the "Philosophy and History of Civilisation." London: Weale, Knightbridge.

NEW SYSTEM OF GEOLOGY—JONES v. ENNOR.

SIR,—I am glad to see that an opponent has at length come forward to do battle with Mr. Ennor and the 21 letters which he has written in your valued Journal. Mr. Jones's first letter, in last week's Journal, is certainly very talented, and written in an excellent spirit, which augurs well for what is to follow. I cannot, however, allow him to run away with his assertions as to the Earth's density, a subject which I had occasion to refer to in one of my letters on Geology. Mr. Jones states that it has been ascertained that the Earth's density is upwards of six specific gravity, or six times the weight of water. But he does not say how this density has been arrived at. It is all but certain that the Earth is a hollow sphere, for a body rotating at the rate of 1000 miles an hour, which is the velocity of the Earth on its axis, could not, according to the known laws of gravity and motion, take any other shape. Let Mr. Jones try the experiment with glass, or any other soft substance, and he will find it so. The calculation is that the crust of the Earth cannot be more than 150 miles in thickness, and if the average gravity is six, taking the earth as solid, the crust would have a gravity of at least sixty, which is quite out of the question, for the average of the strata taken from the deepest mines is not more than three specific gravity.

I likewise dissent from Mr. Jones's remarks on the provinces of Geology. Why do we collect fossil plants and animals, but to discover the relative ages of the rocks, and the conditions under which they were formed or deposited? And that, I think, is the high road to ascertain the origin of the rocks, and of the material world. To deprive the science of Geology of this object, as Mr. Jones proposes, would be to rob it of its chief beauty and usefulness, for then it would be a thing without an object, except to the practical miner. If Mr. Jones had said that many of our Professors have ignored that object in their writings I would have agreed with him, but that is no reason for saying that the narrow views they take embrace the whole province of Geology.

It is only by reasoning on facts that any new knowledge can be added to science, for if we were always to confine ourselves to facts, and not to use our reason on them, we can make no progress. We must go from facts up to theories, if we expect to make progress in any science. What can be more useful to the miner and man of science than to discover the origin of the rocks? For that study will open their eyes to a multitude of fallacies, and such, I think, is the mission of geology.

A. ALISON.
 Sloane-street, Dec. 27.

THE FALLACY OF THE IGNEOUS THEORY.

SIR,—In the Journal of Saturday last, under the heading I have put over this communication, you gave a short account of the proceedings at a recent meeting of the Manchester Geological Society, from which I find that Mr. Dickinson condemns what he is pleased to call "the igneous theory." If he had satisfied himself with merely condemning the theory I would not have troubled you with a word in reply, but as he strengthens that condemnation with the high authority of Sir Charles Lyell, I am constrained to say that he has misrepresented the statement of Sir Charles Lyell, to which he referred. These are the words of Mr. Dickinson—"Sir Charles Lyell, at the recent meeting of the British Association, which was held at Bath, withdrew the view that granite was of igneous origin, and said that the view usually taken by geologists, that granite and the whole of the metamorphic were of igneous origin, required reconsideration." Now, what Sir Charles Lyell really did say (I quote from the official report) was: "He was speaking of the change produced in rock by hot water, and proceeded—"The study of late years of the constituent parts of granite has, in like manner, led to the conclusion that their consolidation has taken place at a temperature far below those formerly supposed to be indispensable. Gustav Rose has pointed out that the quartz of granite has the specific gravity of 2.6, which characterises silica when it is precipitated from a liquid solvent, and not that inferior density—2.3, which belongs to it when it cools and solidifies in the dry way from a state of fusion. But some geologists, when made aware of the intervention on a large scale of water in the formation of the component minerals of the granitic and volcanic rocks, appear, of late years, to have been too much disposed to dispense with intense heat when accounting for the formation of the crystalline and unstratified rocks. As water in a state of solid combination enters largely into the aluminous and some other minerals, and, therefore, plays no small part in the composition of the earth's crust, it follows that when rocks are melted water must be present. Independently of the supplies of rain water and sea water which find their way into the regions of subterranean heat, but the existence of water under great pressure affords no argument against our attributing an excessively high temperature to the mass with which it is mixed up. Still less does the point to which the melted matter must be cooled down before it consolidates or crystallises into lava or granite afford any test of the degree of heat which the same matter must have acquired when it was melted, and made to form lakes and seas in the interior of the earth's crust. We learn from Bunsen's experiments on the Great Geyser, in Iceland, that at the depth of only 74 ft. at the bottom of the geyser a column of water may be in a state of rest, and yet possess a heat of 120° Cent., or 248° Fahr. What, then, may not the temperature of such water be at the depth of a few thousand feet? It may soon attain a white heat under pressure." There is nothing in all this like an abandonment of the igneous theory, much less like a "withdrawal of the view that granite was of igneous origin."—*Carmarthen, Dec. 27.* T. H.

MINERAL RESOURCES OF CORNWALL AND DEVON.

SIR,—I have read with much pleasure the letters that have from time to time appeared in your Journal, from your many able correspondents, respecting the geological position of these counties. Mr. N. Ennor has alluded to the book of Nature as a safe guide for man to work by, and I quite agree with him, that tributers are the only men of the working class that really study Nature's book, and watch the changes that take place in different mines. After working 20 years as a tributer in some of the best mines in Cornwall, I have observed many changes take place, not only in the lodes, but also in the nature of the rock in which the lodes are embedded. As I have read your most valuable Journal respecting our Cornish mines, I had hoped that I might see one great mystery disclosed, but not a ray of light has yet dawned on the subject, which is one of great importance to all concerned in mining, especially mine agents. I will call attention to some of our deep mines in Cornwall, as to their produce of metal: many of them were rich in copper near the surface, but at deeper levels are rich in tin; others made tin on the backs or near the surface, and copper in depth. Secondly, we will take the eastern district, commencing with Caradon, which is rich in copper: the same lode at Holmbush and Kelly Bray are copper, Redmoor tin, East Wheal Florence copper, Kit Hill tin, Drake Walls tin, Hingston Down tin-backs and copper in depth, Devon Great Consols copper, and the same lode, seven miles to the east, are tin. Now, I ask, what has caused this great change in these lodes? In one mine they are copper and tin, and in another tin, yet they are the same lodes. Now, as I have already stated, there are certain laws laid down by Nature by which a Practical can discern when these changes are about to take place, changing a tin lode to a copper, and a copper to a tin. Now, I contend that there is a marked change in the composition of the rock in which the lodes are embedded. I find that it altogether depends on the nature of the rock as to the value of the lodes, and what kind of metal they shall produce. Now, Sir, as nothing has been said in the numerous letters for the guidance of those engaged in mining, as to the marked change that must take place in the composition of the rocks, so as to change the lode from tin to copper, and from copper to tin—and some mines, as I have stated, have produced both tin and copper—if someone will throw light on this most important question, I feel assured it will be of great advantage to the mining world, and a safe guide to all mining men. If the different channels of ground were properly analysed by our mining authorities, and a correct statement forwarded to the Journal for publication, it would tend very much to assist all operations, and lead to profitable results to the rising generation, as the different classes of rocks have not yet been shown that contain each kind of metal.

Dec. 27.

OTEA COPPER MINE.

SIR,—In accordance with the advice given in your correspondent's letter, which appeared in your Journal of the 17th inst., I called at the office of this company (No. 8, Austinfriars, London), and made a full investigation of the merits and prospects of the undertaking, and I am pleased to confirm all that he has stated in its favour. If others would do the same, I believe this would be one of the favourite and most prominent speculations of the day. The mine has already yielded a large quantity of ore, with the aid of the rudest and most inefficient machinery. Even in the ground opened there is still a great deal of valuable ore to take away; and with the new powerful machinery, and other steps now adopted, not only will the expense per ton be very much reduced, but more ore will be extracted from the same quantity of stone. It is stated by the best practical men who have examined the property, that a good profit can be made from the ore already discovered, while the appearances lead to the conclusion that, by further development, it will become "a great mine"—probably the Barra Barra of New Zealand. It must not be forgotten, also, that the property is held by the company in perpetuity, that there is no land carriage, and that the freight (in the wool ships) is almost nominal.

Dec. 27.

HALLENBEAGLE MANAGEMENT.

SIR,—It is all very fine for your masked correspondent, "T." to attempt to stab his neighbour's fame in a public newspaper, and when challenged on the subject, vapourise about ghost stories. The question at issue is not whether there was any red pine in the Fort of Falmouth, but whether there were any Memel or Dantzic rods; and if so, could they have been sold at a lower rate than Hallenbeagle's adventures paid for them? He intimates that they could, but does not say so, as he knows that they could not be had for a less price elsewhere. In his former letter he also hints about the "measures," but makes no direct charge; should, however, your correspondent be possessed of sufficient moral rectitude to drop his mask, I shall be happy to "break a lance with him" on this subject, and, perhaps, could "a tale unfold," that would make this "poor erring stuff" man give up his "ghost," or wish that he had not stirred up those "horrid feelings" within his "vindictive" breast.

Truro Steam Saw-mills, Dec. 27.

THOMAS TREGAVERS.

PRICES OF MATERIALS.

As charged at SPEARIN MOON MINE during the following months:—			
Description.	July.	August.	September.
Winze kiddles	each 10s. 0d.	—	—
Longwood timber	per foot	—	0s. 8d.
Dram ditto	0 9	—	—
Yellow pine ditto	1 4	—	—
Best candles, carriage free	5 3	—	5 5
Tallow, ditto	per cwt. 40 9	—	—
Grease, ditto	26 0	—	—
Powder, ditto	per 100 lbs. 46 0	—	—
Safety fuse, ditto	per coil	—	—
Rope, ditto	per cwt. 48 0	—	—
Hemp, ditto	per lb. 0 6	—	—
White yarn, ditto	0 8½	—	—

HOLLOWAY'S OINTMENT.—In bad legs, scrofulous sores, and glandular swellings, this ointment operates very gently, but very surely, and with a rapidity that resembles magic. It should be rubbed into the parts affected, after they have been fomented with lukewarm water. The purifying and curative powers of this marvellous unguent have never been disputed by anyone who has given them a fair trial. It contains not a particle of any substance of a noxious nature, nor is there a case on record in which it has done the slightest harm, while there are authentic reports of innumerable cures effected by it in all countries. It is as mild in its action, as it is powerful and beneficial in its effects.

COPPER. On the very first day of the year the smelters announced an advance of 5*l.* per ton, raising prices to 108*l.* for tough cake, tile, and ingot, 111*l.* for best selected, and 115*l.* for sheets and sheathing. The market after that became exceedingly firm, and, in consequence of the scarcity of ore, a further advance was anticipated. Simultaneously with copper, an advance of 4*l.* per lb. was declared on yellow metal. The copper market still continued firm, and there was a considerable demand; but the smelters, notwithstanding that they had themselves fixed the prices, in their not very unusual extraordinary manner of acting, declined to sell at their own fixed prices—a rise of 7*l.* to 8*l.* having occurred in the standard of ore, and in consequence, on Jan. 15, another advance of 5*l.* per ton was made, thus making prices 120*l.* for manufacturers' tough cake, tile, and ingot, 123*l.* for best selected, and 127*l.* for sheets and sheathing. The market still continued firm, and another rise of 4*l.* in the standard of ores still tended to strengthen the market. About that time, however, the market became much quieter, and second-hand parcels could be purchased under fixed rates, and soon after at 3*l.* to 4*l.* under smelters' prices. In February the demand rather improved, and for a short time there seemed a better feeling; but soon the transactions became again limited, and parcels in second hands could again be bought at 3*l.* to 4*l.* under fixed rates. About this time, however, the money market became easier, and, in the first part of March, a better feeling again sprang up, and although purchasers could still buy under smelters' prices, yet it was expected that, in the event of a good supply of orders coming in, second-hand parcels would be cleared off, and buyers would have to pay full prices. These anticipations, however, were not realised, and on March 1 the smelters announced a reduction of 5*l.* per ton, making prices 108*l.* for tough cake, tile, and ingot, 111*l.* for best selected, and 115*l.* for sheet and sheathing. This tended to strengthen the market, as previously several second-hand parcels had been pressing the market at 3*l.* to 4*l.* under fixed rates. On the 6th of March the smelters again reduced 5*l.* per ton, making prices to 103*l.* for tough cake, tile, and ingot, 106*l.* for best selected, and 110*l.* for sheets and sheathing. This fall was not at all expected, as it was thought the former one would be quite sufficient to steady the market; yellow metal also fell 4*l.* per lb. This decline, however, failed in producing more activity, and transactions became exceedingly small. In April the market continued inactive, no improvement took place, and business could again be done at 3*l.* to 4*l.* under official rates; and on April 11 the smelters announced another fall of four shillings, making prices 104*l.* for tough cake, tile, and ingot, 107*l.* for best selected. Even this decline did not produce any demand, and buyers could still operate at 3*l.* to 3*l.* under fixed rates. Yellow metal also fell 4*l.* per lb. The market still continued heavy, and without improvement. In May another decline in prices was generally expected; but, in consequence of the scarcity and relative high prices of ores and regulus, this was not made, but buyers could still operate at 3*l.* under fixed rates. This state of things continued until the close of the month, the market being still dull and without improvement, and transactions being still carried on under official rates. In June the market remained inactive, and the prices of ores and regulus began to show a decline. The smelters themselves made no reduction, but the market was slack, and the consequence was that on June 17 a further decline of 5*l.* was announced, bringing prices, however, only to the point at which previous transactions had taken place. For a short time the market continued quiet; but before long it became firmer, and it was impossible to buy under fixed rates. The standard of ores advanced about 2*l.*, and smelters would only sell at an advance of 3*l.* upon fixed rates; and on July 14 the smelters announced an advance of 5*l.* per ton, making prices 109*l.* for tough cake, tile, and ingot, 112*l.* for best selected, and 116*l.* for sheets and sheathing. This rise was not expected, and the market became so firm as to be able to buy for some days past, except at 3*l.* to 5*l.* above fixed rates. Yellow metal also advanced 4*l.* per lb., raising the price to 9*l.* per lb. The market now became firm at the advance, and though transactions were not numerous, yet business could not be done under official rates. In August, however, the market became less firm, and operations could be carried out at 2*l.* under fixed prices; and now a downward tendency in the market became observable, sellers being eager to realise, while buyers were disinclined to purchase, except at 4*l.* under fixed rates, and transactions in manufactured ores were very limited. In September the market continued quiet, and the only transactions could only be done at 2*l.* to 3*l.* under the official quotations. In September, at the commencement of the month, no improvement occurred, but in the course of the month the market became rather firmer, and manufactured could only be bought at 104*l.* to 105*l.*, and in this state the market continued throughout the month, the demand being very limited. In October the market remained depressed, and business could be done under official rates, transactions taking place in manufactured at 98*l.* to 99*l.*, and in unwrought at 85*l.* to 86*l.*, and a fall became generally expected. In November, did not occur, although a better feeling in the business was stated to have occurred. In December no change in fixed rates was made at the smelters' meeting, although a reduction was generally expected; since then the market became a little steadier, and second-hand parcels could now too readily be obtained at 3*l.* to 4*l.* under official quotations. The market still became firmer, though still possible to buy under smelters'

In Welsh Iron the trade during Jan. and Feb. continued moderately brisk, and the orders on hand were very fair, but in March there was an agitation among the miners, colliers, and puddlers, in reference to a further rise in wages, and notices were given by the makers to the effect that they would not work unless they received an advance of from 10 to 15 per cent. higher than the masters offered, and the result was determined to stop the works unless the men submitted to the terms offered. In April the trade was moderate, and much anxiety was felt as to the arrangement with the men, as upon this to a great extent depended the future prosperity of the trade, for although some of the men had continued at their employers' terms, the question was not finally settled. As the agitation, however, decreased, the trade began to look more favourable and the makers began to have an average number of orders on their books, buyers now began to go to the pits to buy iron, and a considerable revival was evinced. In May the works were in regular employment, and the demand for rails was great. The principal makers would not accept orders except at full list prices. But soon after this the demand became checked by the American tariff, and in June the quotations were not so firm, and the market became rather in favour of buyers. In July the makers were fairly supplied with orders, but the decision of the Staffordshire makers caused a demerit of 10s. per ton. Rails continued to be sent out to New York in large quantities, and the announcement of the modified tariff in America checked the drooping tendency of the market. In August the trade was somewhat better, and the corresponding state of peace between Denmark and the German Powers, the trade continued in a satisfactory condition, and the tendency was to further improvement. Rails were in good demand, the exception in the new American tariff in favour of the promoters of certain railways having acted favourably upon the market. In September, although the scarcity of water caused the stoppage of some of the principal departments of many of the works, the shipments were considerable, and there was an improved demand for rails, and prices continued firm. When, however, the rain fell it caused considerably a fall at the works, and the supply of orders was not so good as in the previous month. During the latter state of the trade in other districts some orders found their way to works which would not otherwise have done so. The demand for iron, and the absence of speculation, enabled makers to maintain their prices, despite the unfavourable tendencies of the money market. In October the trade still retained its vitality, and there were no complaints of want of orders, nearly all the principal makers having their books full: there was also an improved home enquiry, but the depression of the money market tended to check exports; quotations, however, were maintained. In November there was a moderate supply of orders, but not so good as in the previous month. In December the trade could be employed at several of the works. The pressure in financial affairs, however, was not without its effect upon the trade, although as yet makers have been able to maintain list prices, and no serious reduction can take place without a corresponding reduction in the wages of the men. When, however, the Bank rate was reduced a slightly favourable influence was felt, and it was expected that orders would be given out more freely. In December the makers were fairly off for orders, but there was more anxiety on the part of makers to accommodate buyers, and prices were slightly in their favour. In the present conjuncture, however, the makers are not so anxious to oblige makers. Several leading makers now began to complain that orders were getting scarcer, and business was checked by the general expectation of a reduction in price on quarter-day—a reduction also of 10 per cent. was expected to be announced in wages. In Swedish Iron, towards the end of Jan., the quantity in London was fast diminishing, and there was every probability that higher prices would be asked by the holders; in the course of the same month prices were quoted 5s. to 10s. per ton higher. In Feb. the quantity in London was not so much maintained, as the stock here was comparatively small, and until it was replaced prices were not so high. In March the demand continued, and prices still rose. This continued until May, when the price gave way. In the three following months prices still gave way, and but comparatively little business was done; from that time to the end of the year the demand has continued

SPELTER.—At the commencement of the year the state of continental affairs had a considerable effect upon this metal, the price gradually went up, and 400 to 500 tons were sold at 20*l.* 10*s.* on the spot; the stock then in London was 5336 tons. For a time the market continued to advance, until it reached 22*l.* on the spot; but at length the continued difficulties on the Continent, and the uncertainty as to the turn affairs would take, tended to produce a stagnation, and there was no hope of improvement until something definite was determined upon. In February, things remaining in an unsettled state, the price continued at about 21*l.* 15*s.* on the spot, while the stock in London increased to 6177 tons; still great uncertainty existing as to continental affairs, the price fluctuated considerably, falling to 21*l.* 5*s.*, and then rapidly rising to 23*l.* 10*s.* on the spot. In March prices continued firm, and the stock in London rose to 5320 tons. In April, however, the prevailing feeling, which has prevailed generally unmodified, and the price fell to 22*l.* 5*s.* on the spot. Business now became dull, the state of continental affairs still acting upon the market. In April prices further declined to 21*l.* 5*s.* and 21*l.* 2*s.* 6*d.* on the spot, and 21*l.* 10*s.* for forward delivery; the stock in London increased

to 11,000 tons. The market remaining inactive, prices declined to 207. 10s. on the spot, but soon afterwards rose to 211. on the spot, and 217. 7s. 6d. for forward delivery. In May the market continued quiet, with few transactions, the stock in London being 11,450 tons; but soon a slight revival took place, and prices advanced to 217. 15s. to 217. 17s. 6d. on the spot, and 221. to 221. 10s. for forward delivery. This improvement continued, an active demand arose, and transactions took place at 221. 15s. on the spot, and 232. for forward delivery. This improved state of things continued in June, and prices rose to 231. 10s. on the spot, and 231. 15s. for forward delivery; the stock in London rose to 12,445 tons. The trade now seemed to have passed entirely into the hands of speculators, consumers only buying from hand to mouth, and some few parties reported to be monopolising the article. Small lots were sold at 241. on the spot, but business was limited, and, in the present state of political affairs, very difficult to say how the market might be affected. In July, owing to the renewal of the blockade of the Prussian ports, together with the fact that almost the whole of the stock in London is in very few hands, caused the market to advance considerably, and large transactions took place at 247. 7s. 6d. on the spot, and 241. 15s. for forward delivery; the stock in London was 11,875 tons. Prices further rose to 251. on the spot, and 254. 5s. for forward delivery. Towards the close of the month, the German ports being again open, prices gradually fell to 247. 10s., 241. 10s., and afterwards to 231. 10s. on the spot, lower prices being expected. In August the stock in London rose to 12,991 tons, the demand became more active, and the prices rose to 247. 5s. on the spot, and 241. 10s. for forward delivery, and afterwards to 241. 15s. on the spot, and 251. for forward delivery. In September the market was not so active, the stock in London being 10,964 tons. Transactions became very limited, and prices declined to 241. 2s. 6d. on the spot, and 241. 7s. 6d. for forward delivery, and afterwards to 241. on the spot. In October all signs of animation had disappeared, and the price declined to 231. 12s. 6d. on the spot, the stock in London being 11,992 tons. Very few sales now took place, and prices rapidly declined to 227. and 231. 5s., afterwards to 211. 15s., then to 211. on the spot, and 211. 5s. for forward delivery. In November a slight improvement occurred, and prices rose to 211. 5s. and 217. 7s. 6d. on the spot, and 217. 10s. for forward delivery, the stock in London being 11,816 tons. The market for a time continued to improve, and transactions took place at 211. 10s. and 211. 15s. on the spot. In December the market became again quiet, and prices gave way to 211. on the spot, and 211. 5s. for forward delivery, the stock in London being 11,820 tons. The market continued dull, and the price declined to 201. 5s. to 201. 10s. on the spot. Sales continued very small, and the stoppage of a firm largely dealing in the article tended further to depress the market, and sales took place at 201. on the spot. No improvement occurred, sales were limited, and prices fell to 191. on the spot.

STEEL.—Throughout the year this metal has remained in a most inactive condition. Very little business has been done, and it has hardly ever been known to remain for so long a period in such a state of dullness and inactivity.

TIN-PLATE.—At the commencement of the year a good demand existed, prices were firm, and early in the month advanced 1s. to 1s. 6d. per box; this was rendered necessary by the enhanced price of iron. Business continued good, and prices were maintained till the end of March, when the fall in tin, and other circumstances, had the effect of reducing the price 6d. per box. The demand remained good till the middle of the following month, when it became less active, and in May a reduction of 1s. per box in coke and 6d. per box in charcoal took place, and the trade became seriously affected by the American tariff, and it was expected that during the continuance of this high protective duty shipments to that country would be greatly reduced. In June and July there was little or no alteration, business being only moderate, but in August there was a slight tendency to improvement. The works suffered from want of water, and in consequence the make became somewhat diminished. This state of things continued during the following month. In October the works were in fair employ, but no activity. Coke plates were in fair demand, but charcoal was dull, and many of the makers were stocking for want of orders. In November the demand still continued limited, and prices remained unaltered; some makers had a few orders, but others were stocking in expectation of better times, and some of the works were not in regular employ. In December the demand had not improved, and some of the charcoal makers were running short of orders. Coke, however, was more required for, but soon after, in consequence of no accession of orders, the price fell to 21s. 9d. per box.

QUICKSILVER.—At the commencement of the year the great demand for the article continued unabated, but buyers did not find any greater facilities in having their wants supplied, being compelled to wait for arrivals. This state of things continued till March, when some second-hand parcels were sold at 81. 15s.; at this price considerable transactions took place, and afterwards at 91. per bottle. In April, May, and June, there being no arrivals, second-hand parcels could be obtained, for which buyers had to pay above prices, and even as high as 91. 5s. per bottle was in some instances paid. In July the Spanish Government decided upon fixing the price at 81. per bottle, since which time buyers have been enabled to supply their wants at the fixed price; the demand, however, has only been moderate, but the price is firm at the quotation.

THE IRON TRADE OF NORTH STAFFORDSHIRE.

The commencement of the year 1864 found the Iron Trade of North Staffordshire in a condition of prosperity and some excitement. The list price of Staffordshire bars had advanced from 77. to 81. 10s., and so probable was a further upward movement considered, that the makers of pig-iron had, upon the strength of that probability, intimated their intention to advance the wages of colliers and ironstone miners 6d. per day from the beginning of January. The demand in every branch of the trade, whether for finished iron, for pigs, or for ironstone, as well as for coal, was active, with prices not only firm, but with a tendency to rise. Thus the year opened. Almost immediately a further 12. per ton was added to the list price of bars, making them 91. 10s., and the wages of puddlers and millmen were raised, as well as those of the colliers and ironstone miners, making an advance in the rate of wages of the workmen all round equal to 30 per cent. within six months. Pig-iron was now quoted at 41. 5s. per ton, and furnace ironstone from 13s. 6d. to 16s. 6d. It was not long, however, before unpleasant symptoms of reaction became observable. Before a fortnight had elapsed the trade reports represented "the tone as less buoyant." By the end of February it was stated that the trade had not been so quiet at any time during the year; and at the April quarterly meeting the terms "languid" and "dull" properly described the condition of the trade. At the meeting no alteration was made in the list prices of finished iron, but pigs were quoted at 31. 15s. to 31. 17s. 6d., and furnace ironstone was offered at from 12s. to 14s. Orders had been received from the market in favour of buyers. Instances became known of Belgian and even French iron being delivered in England at prices considerably lower than the list prices for Staffordshire finished iron; and, still more remarkably, pig-iron was actually imported into this country from the Belgian works. Those who best understand the trade saw that a great mistake had been made in the rapid upward movement of prices and wages, and that they could not be maintained. Indeed, from this time prices may be said to have been reduced by the force of circumstances without any formal resolution of the manufacturers, and orders were willingly taken at 11. per ton under list price. In July, a reduction to that extent was generally recognised, and the lists of the makers altered accordingly; but even that concession was not sufficient to secure any considerable orders, or to relieve the demand from the dullness which had settled down upon it. Pigs had become unsaleable at any price which would pay for the cost of production, and for ironstone the trade reports of that day truly stated that "it was impossible to name quotations," for there was no market for it. It was at this time, and under these circumstances, that the masters gave notice of a reduction in the wages of colliers, ironstone miners, and blast-furnace men, equal to the last advance which they had received. To the credit of the men, it deserves to be stated that, in the intensely disagreeable case, and, probably remembering the manner in which their employers had met them when they went up, they, with a few exceptions, which had better be forgotten, accepted the reduction at once.

Nothing of importance took place at the October quarterly meeting. Bars were not further altered in price, but pig-iron had become depressed from 31. 10s. in July to 31. 5s. per ton, and ironstone was correspondingly low. To the time we write the trade has fluctuated within somewhat narrow limits, but has not rallied; and, upon the whole, the last quarter of the year has been flatter in its finish than for a long period previously. It is considered certain that no alteration in prices will be made at quarter day next, but a reduction in the wages of puddlers and millmen, equivalent to the reduction of 11. per ton on finished iron, which took place in July last, has been determined on. It will be observed, by reference to the figures we have quoted, that pig-iron has fallen in price quite disproportionately to bars, and an advance upon the price now ruling for pigs, would only restore the equilibrium between the prices of bars and pig-iron.

The year now closing has not been without its important lessons. It is now evident that prices were advanced to a point which was not warranted by the extent of the demand, as compared with the capabilities of supply, which stimulated foreign competition, and caused orders for the Continent, and even for the home market, to be diverted to the manufacturers of other countries. It is felt that a narrow view of the whole question has been taken by the English ironmasters, and a false impetus given to the trade, from the consequences of which they are themselves the greatest sufferers. It is felt that the laws of demand and supply, which cannot be set aside by resolutions, and refuse to yield to combinations, have been too much lost sight of by those who have undertaken to lead the trade. There is, as a consequence, a general conviction that matters of such importance should not be left to the management of a few of the principal makers, but to the entire iron-producing district, but that to prevent any further alterations in prices and wages, there ought to be regular conferences of the members of the trade, from each of the most important districts in the country. The result, it is to be hoped, will be an improved organisation, upon a wider basis, for the future.

As regards North Staffordshire, it is satisfactory to find that, during the year 1864, it has not only held but improved its position. In no previous year has it so successfully sustained competition, or strengthened its reputation for excellence of quality. Never before has the district turned out so large a quantity of finished iron, nor so great a proportion of the descriptions which require to be of a superior quality. Important extensions of works have been made, or are in progress; and when these are in full operation, it is estimated that nearly all the make of pig-iron of North Staffordshire will be consumed within the district.

THE SLATE TRADE—ITS STATE AND PROSPECTS.—The highly satisfactory position of the SLATE TRADE—the demand being so much greater than the supply—renders all information respecting it of general interest. Some three years since a descriptive pamphlet was issued by Mr. T. C. Smith, of which two editions of 5000 each were speedily disposed of; this has now been re-printed, with much original matter from practical authorities in the several districts, and particulars of most of the quarries at work, explanatory of their state and prospects. The new work is published at 1s. each, and can be had at our office.

TIN MINING IN AMERICA.—An influential company, with a capital of 60,000 shares, of \$5 each, has been formed in New York under the title of the American Tin Mining Company. The properties to be worked consist of upwards of 900 acres of land in the town of Jackson, Carroll County, New Hampshire; a portion in fee, balance in mineral rights, together with all royalties, with ample water-power, &c. The Legislature of New Hampshire have granted a special charter, at their late session, liberal in its terms, this company is extensively developing its mines at Jackson. In addition to its surface evidences they have an adit under contract which will cross-cut all the veins at a depth of over 100 feet. Already the evidences are such that large returns are expected. This being the first tin mine discovered and worked in the United States, much interest is evinced in its development; and from the reports of Professors Jackson and Shepard, as also from a later report by other parties, it is anticipated that it will be a lucrative investment.

MEETINGS OF MINING COMPANIES.

ST. JOHN DEL REY MINING COMPANY.

The following is the result of the poll taken yesterday at the office of the company:—

For Mr. Bonamy Price	4556 shares	1528 votes.
Mr. George W. S. Jago	242	152
Mr. Spencer Herapath	565	169

Mr. Bonamy Price was, therefore, declared duly elected a director of the company.

DON PEDRO NORTH DEL REY MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Liverpool-street, on Thursday.—Mr. HENRY HAYMEN in the chair.

Mr. J. E. DAWSON (secretary) read the notice convening the meeting. The report of the directors (an abstract of which appeared in last week's Journal), was taken as read.

The CHAIRMAN said, before referring to the report, he might mention that a letter had been received, with reference to this company, from a gentleman who had been more than 34 years in Brazil. (The letter was read. It was written by Mr. Furst, who expressed a favourable opinion of the company's property.) He (the Chairman) then said that he need not trouble the meeting with any long statement. The report of Capt. Treloar had been in the hands of the shareholders some days, and those who had read it could have but one opinion—that, though the company was not in so favourable a position as anticipated at the last meeting with regard to the dividend, yet that their prospects were very much better than they had ever before been since the formation of the company. It must be remembered, that when they originally commenced operations they were solely dependent upon Bowden's Mine for produce; but now they had two different sources, from both of which they confidently expected that during the present year they would be able to produce a considerable amount of gold. That was altogether irrespective of the Machine, with regard to which they had been told by an experienced miner that he could find a spot where there was a large quantity of gold; and although it was true, as Capt. Treloar stated, that the miner in question had failed to discover the quantity of gold expected, yet "that the result of his operations, together with those of the company subsequently, strengthened materially their belief that Machine was a spot of no ordinary promise." This was further corroborated by the testimony of several shareholders who had visited the mine, and also by information derived from other sources, all of which went to prove that Machine would open up a very rich mine. It must be borne in mind that when this property was purchased that was not thought of as a gold-producing place; therefore, taking this and all other circumstances into consideration, he felt justified in stating that the company was never in such a good position as at the present time. The falling off in the produce was, of course, as unpleasant to the directors as it had, no doubt, been to the shareholders; but it was one of those things that it was impossible for Capt. Treloar to have foreseen, the fact being that there were not a sufficient number of skilled Englishmen to compete with the hard ground, and he (the Chairman) did not think that blame could in any way be attributed to Capt. Treloar on that account. His (the Chairman's) own impression—based upon information collected from different sources—was, that Bowden's Mine would prove a very first-class property. Between April and June the adit would be completed, and then they would be able to obtain a very large amount of produce. As regards the Brancos Mine, that spoke for itself; for, as stated by Captain Treloar in his report, "the lode has enlarged from a few inches to 7 ft. wide," which, he need hardly say, was a most encouraging fact. He might further mention that, according to the Articles of Association, the directors were compelled to hold the general meetings in December, but they proposed convening one about March, to close up the accounts to the end of December, and that the general meetings would in future be held in March, that being a much more convenient month than December. (Hear, hear.) Having stated that he should be glad to afford any further information that the shareholders might desire, he concluded by moving that the report of the directors should be received and adopted.

Mr. VILLESBOISNET was agreeably surprised to hear from the Chairman that the adit in Bowden's Mine was likely to be completed so early as April, for he thought it would have taken a very much longer period. He hoped that the recommendation of the auditors—that the sum of 16077. 15s., received for premium on the issue of 6431 shares, and credited to profit and loss, be transferred from that account to the credit of preliminary expenses account, thereby to reduce the amount at debit of that account to the sum of 2991. 6s. 8d.; and that the preliminary and deferred expenses accounts be gradually liquidated by the transfer of the debit of profit and loss, at the rate of 25 per cent. per annum—would be carried out by the directors. He called attention to the cost incurred in bringing the gold to this country, and suggested that the items of directors' fees, office rent, advertising, &c., should have been under the head of profit and loss. He must say that he could only congratulate his fellow-shareholders upon the very able way the directors had carried out the financial arrangements, and upon having made a call in due time, so that there was no occasion to press the payment of it. He hoped that the works would be pushed on with all necessary vigour, as there was no doubt that the shareholders would well hold, and that shareholders would come forward and provide all the capital required.

The CHAIRMAN said that the recommendations of the auditors would, of course, receive the attention of the directors. As regards the cost of bringing down the gold, he thought such arrangements had been made that he did not consider it possible that item could be reduced, for the East del Rey and the Santa Barbara Companies each bore their proportion of the expenses of the gold troop. As regards the suggestion that the item referred to should be charged against profit and loss, that, he thought, could hardly be done without they were going to pay a dividend. Mr. VILLESBOISNET thought that the expense of exchange might be saved if they sold their gold in the Brazil.

The CHAIRMAN said that question had been duly considered by the board, but it was the opinion of Messrs. Wormald and Hesketh, members of the board, both of whom had passed a considerable time in the Brazil, that the gold should be sent to this country for sale. As regards the large charge, a considerable proportion had been incurred in connection with the Brancos property, but he hoped that in future balance-sheets shareholders would not see any large charges at all. With respect to the question of directors' fees, if the hon. proprietor would turn to the balance-sheet, he would find a proportion of that item charged against profit and loss. Obviously it must be so for a certain period, for they were at present carrying on two distinct operations—one of raising gold, and the other of opening out new ground, and it was but fair that the gold actually raised up to the present time should only be charged with a proportion of the total expenditure. He might mention that the auditors did not think it at all necessary that a statement of the expenditure should be given, but the directors advised its being done. Had they been in a position to have recommended the declaration of a dividend, they would have charged a proportion of the expenses against the quantity of gold raised. He did not think they would require any call, for he believed they had sufficient money to go on without calling upon the shareholders. The reason the call had been so well responded to was, doubtless, attributable to the fact that among the proprietors there were some very wealthy men.

Mr. VILLESBOISNET thought that all such expenditure as directors' fees should not be charged against capital, but against profit and loss. He did not wish to convey the idea that the directors ought not to be paid; for should there be a proposition to that effect he would be found one of its most prominent antagonists; for they had in the chair a most able gentleman, under whose guidance he felt the affairs of the company were most efficiently managed. The hon. proprietor had thanked the hon. proprietor for the compliment, put the motion to the meeting, when the report was received and adopted unanimously.—The retiring directors and auditors were re-elected.

NOVA SCOTIA LAND AND GOLD CRUSHING AND AMALGAMATING COMPANY.

A general meeting of shareholders was held at the company's offices, 4, New Broad-street, on Thursday.—Mr. G. L. BROWN in the chair.

Mr. R. SMITH (the secretary) read the notice convening the meeting.

The report of the directors stated that early in the present year it became evident to the board that the maintenance of the works in the four districts occupied by the company would involve a much larger return upon the capital than was expected in the outside; and as two of these districts—Tangier and Wine Harbour—after a trial of some extent, exhibited little encouragement, it was resolved to stop the operations in those places. Subsequently an offer by an American company of 30001. for the Wine Harbour property was made and accepted, thus relieving this company of one of the two properties referred to, and at a profit upon the outlay. The other property remains in abeyance, awaiting a favourable offer for the same, or more ample means for developing it. The machinery there is intact. For a time it appeared probable that Sherbrooke would realise a very large return upon the outlay, the Mine lode being found very productive, and yielding for several months an increasing supply of gold. Subsequently, however, it fell off, and the extent of the company's rights upon the lode being very limited, the works upon the same were suspended. Upon the Sears and North Cummering lodes operations are still progressing, and with some prospects of success. At Oldham three additional properties have been acquired, those known as the Hall, Wallace, and Davies claims, and active works are being carried forward upon them. The last of these especially contains a great number of lodes, and of a size sufficient, when properly developed, to keep the machinery of the company at Oldham fully occupied. With this property an additional crusher was purchased, and this, together with the original one, is being altered and adapted to the requirements of the lode stuff. The result of these alterations is likely to give great satisfaction to the mining companies, some of whom are keeping their quartz until the crushers are ready. Both crushers are, probably, in operation by this time. The amount of gold remitted during the year is 1080 ozs., representing a net sum of 42421. 14s. 2d. The outlay on general mining account, together with the general expenditure, has been met by the profit on the sale of the Wine Harbour property—premium on the issue of the 3569 shares—and by the receipts of gold to within a sum of 3261. 11s. 3d. The directors expressed their strong conviction that the arrangements now completed will more satisfactorily treat the value of gold mining in the province than any hitherto made by this or any company there.

The CHAIRMAN, in moving the adoption of the report, expressed his regret that it devolved upon him to take the chair upon the present occasion, and that it was not occupied by the Chairman of the company, who, however, was unavoidably absent from domestic affliction, and, therefore, they could but regret his absence. As he had been unexpectedly summoned to occupy that chair, he would content himself by supplementing the report with only a few remarks. As the shareholders were aware, this company was established for a twofold object—for mining its own property, and for crushing the quartz received from the property of other persons. But it had been found that the machinery, erected under the advice of eminent mining engineers in this country, had not worked out such good results as had been anticipated, and, therefore, had not met the public expectation. Hence the machinery had had to be altered to make it available for those persons who felt inclined to bring their quartz to the mills to be crushed, and when those alterations had been completed, they had reason to look for an increased income from the quartz. When this company was started it had four properties, but it was subsequently found that the capital was too small to develop the resources of the whole of them, and, therefore, the board had sold one, and another was in abeyance, the operations of the company being the time confined to Sherbrooke, where, as stated in the report, "upon the Sears and North Cummering lodes operations were still progressing, and with some prospects of success." The real fault of the Nova Scotia quartz was not in its quality, but in its quantity. The quality was good enough, but the lodes were extremely small, and the consequence was that, unless they had a regular run of ground, there must in the end be an insufficient quantity of quartz to keep the mills remuneratively at work. That had been the case with the richest lode at Sherbrooke—the Blue lode. The property was cut up into quarter-acre plots, and that had so happened that the richest of their lodes had been circumscribed to that small acreage—that

was why the directors did not consider the Sherbrooke property so encouraging as they believed it was at the beginning of the present year. But they were endeavouring to remedy that evil at Oldham, where they had a large quantity of quartz, known as "claims," which gave the company 1355 ft. run upon six different lodes of quartz, known as the Hall, Wallace, and Davies "claims." For that amount of 1400 ft. there was included a good mill, situated on the Davies property, and the machinery at Oldham was near the other properties, so the large quantity of quartz that would be in all probability produced by those different lodes would, unless some fortuitous accident should occur, keep both the mills going day and night, and in about four or five months it would be upwards of 200 tons ready to be crushed, and by the present time both mills were in operation, and he hoped by the usual sources of information—the newspapers—as each fortnightly mail arrived the proprietors would see that the quartz was really realising the expectations of the directors. As regards the other portion of the company's property—the 10,000 acres lying near the sea shore—until there was a prospect of a through communication being made with the British American colonies he did not think much could be done with it; but, should a railway be made from Halifax right through those colonies, it would, of course, be of material benefit to that large extent of the company's property. He might mention that gold mining in Nova Scotia was making steady progress, the returns of gold from the whole colony for the quarter ending June 30, 1864, being within 6 ozs. of the quantity returned for six months during the previous year. There was a company in Nova Scotia which had been in a similar position to this; but, after having expended a large sum of money without realising any profit, had turned the corner a little before this company had, was now getting 120 ozs. of gold per month, and he hoped at the next meeting that the Chairman of this company would be in a position to state that some similar result had been realised. He concluded by moving the adoption and reception of the report.—Mr. WREN seconded the proposition.

Mr. BIGG thought the expenses of the establishment were very excessive, and inquired why the newly-acquired property had not been obtained direct from the Government, and thus save the 1400 ft.—The CHAIRMAN said the simple answer to that question was that those claims were occupied previously to the operations of the present company.

Mr. BIGG was of opinion that the attention of the company should be confined to gold mining, which would pay them much better than looking after land.

The CHAIRMAN said that the land was part of the constitution of the company; but, at the same time, he fully agreed with the hon. proprietor that they should direct their attention to gold mining; but as the land did not cost anything, he would rather wait to see what it would turn out to be worth than to part with it at the present time. Mr. BIGG did not apprehend they would get much from crushing the quartz belonging to other people.

The CHAIRMAN said, upon that point, he would read an extract from the last report from the manager, in which he stated "that he had no hesitation in saying they would have a large share of the public quartz, as the prevailing opinion was very much in favour of the new batteries." He reminded the meeting that there was no outlay made in inviting the public, and all that was expended upon the plant was necessary for the purposes of the company.

A SHAREHOLDER hoped the directors would keep the expenditure down to the lowest point, and that at the next meeting there would be a more satisfactory report presented. Mr. CHAIRMAN said that the directors were deeply interested, and they and their friends had the bulk of the shares, and, therefore, shareholders might rest perfectly satisfied that no unnecessary expense would be incurred.

The report was received and adopted. The CHAIRMAN, in reply to questions, stated that there would probably be a call at about the end of February, but shareholders might feel perfectly satisfied it would not exceed 10s. per share. As regards the remuneration of the directors, it was settled by the Articles of Association, but at the same time the directors would endeavour to carry out the feelings of the shareholders upon that point, as also with regard to the holding of half-yearly meetings.—The retiring directors were re-elected.

A vote of thanks to the Chairman and directors terminated the proceedings.

NORTH WHEEL ROBERT MINING COMPANY.

An ordinary general meeting of shareholders was held at the offices of the company, Austinfriars, on Wednesday.

Mr. JOSEPH PROCTER in the chair. Mr. J. H. MURCHISON (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

A statement of costs and returns for four months (ending with costs for November) was submitted, which showed—

Aug, Sept., Oct., and Nov. mine cost, merchants' bills, &c.	£1875 12 10
Committee, secretary, office rent, printing, &c.	82 8 0
Dues	73 16 6 = £2001 17 4
Ores sold	1554 11 3

Balance (loss) £447 6 1
The general balance-sheet showed a balance of liabilities over assets of 7481. 18s. 4d., against which there were about 60 tons of copper ore sold (with carriage) for about 8601., and 7 tons of tin, which had been sold for 551. 4s. per ton.

The report of the agent was read, as follows:—

Dec. 26.—Since my report presented to you at the last general meeting, wherein I mentioned that I believed the present mode of working would lead to good results, I beg to say that the following work has been done, which will show that improvements have occurred at different points, and probably much more valuable ones are in progress than the last time. West of Murchison's shaft: Up to the present time, the cross-cut of the cross-cut has been extended north 34 fms. 2 in. by the side of the great cross-course, and in about 30 fathoms from the commencement the No. 1 north lode has been cut and driven thereon 8 fms. 5 ft. 6 in. eastward, in which driving it is 18 in. wide, and yields saving work, containing good stones of copper ore, and the lode in the present end is very likely to be more productive. In continuing the driving west through the cross-course we have intersected the same lode, and driven on it 2 fms., and it has a most striking appearance. The end of the cross-cut is driven about 4 fathoms north of the last lode, where the ground is favourable for progress, and we hope to reach the No. 2 north lode in about a month from this time, which lode, when seen at surface, shows a most splendid appearance (at 30 to 35 fms. deep). The 30 end, east of Edward's cross-cut, on the No. 1 south lode, has been driven 1 ft. 3 in., where the lode is small, unproductive, and is suspended. Friend's cross-cut south, in the 30, has been extended 15 fms. 6 in.; we have driven through branches in this distance, but have not yet cut the lode. The 30 end north, on the lead lode, has been extended 21 fathoms 9 in., in which driving we have intersected the No. 5 north lode, and driven on it 3 fms. 4 ft. 6 in.; the lode is about 2 feet wide, unproductive, and is suspended for the present. The 52 end, east of Elliot's cross-cut, on the No. 4 south lode, has been extended 22 fms. 3 ft. 3 in.; this end being nearly under the trial pit sunk on the surface, where the lode looked so promising, and not having realised our expectations, yet we have commenced to rise to try and intersect the shoot of ore, which rise is now up 4 fms. 1 ft. 9 in.; where the lode looks more promising.—West of Trial Shaft: Driving the 42 end, west of Scoble's cross-cut, on No. 1 south lode, through which driving the lode has yielded stones of ore; and the lode in the end is about 18 in. wide, of a promising character. The driving of this end was suspended, in order to cross-cut the No. 2 south lode, which was effected in 18 fms. 3 ft., and a profitable lode has been intersected and driven on east 3 fms. 3 ft. 6 in., and west 4 fms.; in this driving the lode was from 2 to 3 ft. wide, and worth 1 ton of ore per fm., and the present end have the appearance of a long continuance of this productive lode; we hope to be able to resume the driving west, on the No. 1 south lode, which end has every likely appearance of being also productive.—Tin Lode: The 36 end has been driven on the No. 1 tin lode 7 fms. 4 ft. 6 in., through which the lode has yielded good stamps' work for tin, and has laid open a good piece of tin ground for stopping. The tin stops above the back of the 42, east and west of Rowe's cross-cut, are yielding their usual quantity of tin, and the lode contains besides a leader of copper ore on the north part of it. In conclusion, I beg to say that if the above works are carried out I shall have a much more favourable report to hand you at the next meeting. I estimate, in the meantime, we shall probably raise 150 tons of copper ore, worth 8251., and about 18 tons of tin, worth 10001., at a monthly cost of about 4601., for the next four months.—W. GODDEN.

The report of Mr. Adam Murray was read, as follows:—

Dec. 27.—I made a very minute inspection of this mine during the last week, in company with Capt. Godden, and I feel happy to add my testimony to his report. He has placed his views certainly in the most cautious manner before you, and has been exceedingly careful in making his calculations for the next four months, so as to be well within bounds; so much so that even in the present state of the mine, without looking to our near approach to new discoveries, we may put a margin of profit above his calculations, and, in fact, may safely say that this mine is simply paying its costs. I need not trouble you with a repetition of the details of Capt. Godden's report, the measurements stated in which I saw him make, but I will at once proceed to the consideration of a few of the positions mentioned in it. The first, and probably the most auspicious, is of a new lode, the cross-cut, north of Murchison's shaft; here the level (30 fms. deep) is entering into a series of lodes forming junctions with each other, and influenced by a large cross-course. The splendid gossan backs in the direction which the level is passing warrant the belief in the existence of some large deposits of copper and tin, which will doubtless be opened out some time previous to our next general meeting; and it should be borne in mind, in connection with these deposits, that after the 30 fm. level has intersected them, Murchison's shaft is in such an approximate position that deeper levels at the 40, 50, and 60 fm. levels could be projected from it in a brief period, thereby absolutely opening up a comparatively deep and extensive mine at a very little cost. The next point of consideration is situated at the eastern part of the mine, where a cross-cut in the 42 fm. level has passed from the first south lode to the second south lode, the latter of which was very productive in the adjoining mine at Sortridge, and bids fair to be very valuable in this mine. It is intersected at about 25 fms. from the boundary, and appears to be the tail of an extensive deposit of copper ore. Eastward for 120 fms., up to a notable cross-course in that direction, at present it is capable of turning out from 1 to 1½ ton of good yellow ore per fathom. The No. 1 south lode, in the same level, also looks very promising, and to resume the westward drive would most likely lead to important results, as the same lode has recently been cut rich in Sortridge, close to the boundary. The next point I would draw your attention to is in a lower level, on one of the extreme south lodes—in the 52 fm. level, from Elliot's cross-cut here—from the lode being so disordered, or the level not being driven sufficiently far. Capt. Godden has, very judiciously, put the miners to rise in the back to meet the underlie of the great shoot of gossan discovered in the level above. There are various other points, but not of such great consideration, which have been suspended, only to be resumed on a more convenient occasion, and from which valuable results may be expected. The tin stops bear a valuable and permanent aspect, and will keep up the supplies of this metal until much more valuable positions are under weigh. With these few remarks on my survey, in conjunction with Capt. Godden, I beg to congratulate you on the position and prospects of this mine.—ADAM MURRAY.

The CHAIRMAN stated that Capt. Godden and Mr. Murray were present, and from them he inferred that the costs would be about met by the returns.—Mr. ADAM MURRAY, in explaining the different points of operation, drew especial attention to the important series of junctions of lodes in the neighbourhood of the great metalliferous cross-course in the north part of the sett. He regarded that as a feature of considerable prospective importance.—Capt. GODDEN, replying to a question, stated that there were several most important points to come off, and he had no doubt that he should be able to present a much more favourable report at the next meeting.

Mr. M'CALLAN thought the shareholders were greatly indebted to Mr. Murray for his very lucid report upon the present position of the mine.—The SECRETARY, in reply to a question, stated that the general account just submitted was for five months instead of four. The actual financial position of the company at the present time was this—that if all the calls were paid there would be a few pounds on the right side of the book.

Capt. COPE said it appeared from the accounts that the loss which had taken place during the past four months was incurred during the early part of it, and that for the present time the mine was paying its costs.—Mr. ROWLANDS thought the reports were very satisfactory, being in every respect very much better than could have been

expected from what took place at the last meeting.—The reports were ordered to be entered on the minutes, and the accounts were passed and allowed.

The Chairman said the next question was one of finance. The meeting had been informed by the secretary that, providing the share of the mine would be paid off; but it was necessary to provide for the future working of the mine for the current three months.

A SHAREHOLDER said that at the last meeting an opinion was expressed that the committee should have taken some steps for the recovery of the arrears.—The SECRETARY said that the committee, bearing in mind that fact, had taken the necessary steps.

Mr. JOHN PROCTOR proposed a call of 2s. 6d. per share, which was seconded by Capt. COOPER.—Mr. McALLAN moved, as an amendment, that the call should be 2s. per share, which was seconded by Mr. ROWLANDS.

The amendment having been put and lost, the motion was carried, with the addition of a discount of 5 per cent. on all calls paid on or before Jan. 17.

A letter was read from Mr. Clinton asking for the restoration of the shares which he had given notice to relinquish. It was unanimously agreed that the request should be acceded to.—A letter was also read from Mr. T. Nicholls, of Tavistock, to the effect that the mine should be open for inspection but one day in the week.

Mr. McALLAN said he not only entirely agreed with the opinion of Mr. Nicholls, but would suggest that the mine should be open for inspection but one day in each month, for that was the only way shareholders could prevent certain people obtaining information with regard to the position of the mine to use it against the interests of the shareholders. He then proposed a resolution to that effect, which was seconded by Mr. ROWLANDS.—Capt. GODDEN, in reply to a question from the Chairman, said that the interests of the shareholders would certainly be best promoted by adopting the resolution just proposed, but, at the same time, it was entirely a matter for the shareholders to decide.—An amendment was then proposed that the inspection day should be once a fortnight, which was lost, when the resolution was put and carried.

Capt. COOPER then proposed that Mr. Adam Murray should be allowed to inspect the mine at any time; which was agreed to, upon the condition that Mr. Murray should continue to be a shareholder.—A special vote of thanks was passed to Mr. Murray for his very lucid report upon the position and prospects of the mine. A vote of thanks to the Chairman terminated the proceedings.

TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The recent holidays, and the necessary arrangements for the usual fortnightly account, which took place yesterday, have lessened the general business of the Mining Journal; but, notwithstanding, there has been a fair amount transacted, and the tendency of a more favourable character, especially with the improved standard of copper ore this week.

WEST SETONS have changed hands during the week; and enquiries have been made for WHEAL SETONS at minimum prices.—CLIFFORDS have been freely dealt in at fair market prices.—EAST BASSETS are sought for at buyers' figures; WHEAL BASSETS are also enquired for at minimum quotations.—SOUTH FRANCES have been dealt in at nominal prices.—WEST WHEAL FRANCES shares are in request under market quotations.—STRAIT PARKS have changed hands.—EAST CARN BREA has been sought for at improved prices.—GREAT SOUTH TOLGUS have been in active request, consequent on a reported improvement at the mine.—CHREWER and WHEAL ABRAHAM have changed hands at nominal prices.—FRANK MILLS have been in good demand, and find a ready market at advanced prices.—TINCROFTS have changed hands at minimum quotations.—SOUTH DARRENS are sought for at firm market quotations.—EAST GRENVILLE and WHEAL GRENVILLE have been rather quiet this week, although several transactions have taken place.—NORTH CROFTS have been done at slightly improved prices.—NORTH TREKERRIES are dull, but enquired for at nominal prices.—EAST SETONS have changed hands at extraordinary low figures.—HALLSNEAGLES are less active, but several bargains have been effected.—EAST CARADONS have been sought for at fair market prices.

NORTH CHIVERTONS have been freely enquired for, and a great many shares have changed hands.—WEST CHIVERTON and CHIVERTON have been more than ordinarily quiet.—GREAT LAKES are still in good request.—EAST LAKES have been done at lower rates, but a reaction is likely to follow.—GREAT WHEAL VOR has been quoted lower, yet freely dealt in at improved rates, with a tendency to advance.—EAST WHEAL VOR are less active, although some transactions have been reported.—PROVIDENCE and MARGARY have been in request at minimum prices.—EAST CARADONS have been dealt in, but prices have varied, and left off with a weaker tendency.—WEST CARADONS meet with a ready market at minimum prices.—TREAWNY and MARY ANN are sought for at buyers' figures.—HINGTON DOWNS are in better demand.—LADY BERTHAS have been freely dealt in at fair market quotations.—EAST WHEAL RUSSELLS have been in active demand at advanced rates, consequent on the improvement in the 180 east.—WHEAL CREBONS are in better demand, and a large number have changed hands.—EAST CARADON: They are still driving the cross-cut south at the 80 to intersect the south part of the south lode. The 70 east is reported poor. The counter, at the 70 east, is worth 5s. per fathom; the 80 east, 6s.; and the same level west, 5s. The new lode at the 60 east is valued at 10s. per fathom.—EAST WHEAL RUSSELL is represented to be improved in the 130 east, the lode being worth 25s. per fathom, and looking well for further improvement.—MAUDLIN: The lode in the 70 east continues of the same value as last reported, and no change likely to take place at present. They have commenced sinking the shaft below the 70, with a view to get under the rich course of copper at the 80. The other points of operation are without any change.—WEST CHIVERTON: The lode in Burgess's shaft continues to look more than ordinarily well; a splendid pile of lead ore at surface from there. The new discovery at the 70 east is valued at 40s. per fathom, and the same level at the 70 west is valued at 30s. per fathom. The 30 west is valued at 25s. per fathom, and the 30 east is valued at 25s. per fathom. The 20 west is a very promising lode, now worth 10s. per fathom. Other productive places continue to look well.—NORTH CROFTS is reported to have assumed a more favourable appearance in several parts. The lode in the 185 west is worth 14s. per fathom. The 170 west is worth 25s. per fathom; and the 170 east is valued at 30s. per fathom. The 160 east has improved; and the 120 east is looking much better, producing good stones of tin.—EAST CARN BREA is represented to have improved in several places, especially in the 60 west, on No. 3 lode, now worth 8 tons per fathom. The 50 west is looking well; this winz is now down 10 fathoms, and the 50 east is a certainty of a good course of tin in the 30 shortly. Other places continue to look much the same. They have 400 tons at surface.—NEW ROSEWARNE: The prospects here are of an encouraging character, and when the western shaft is completed (which is being pressed forward) several profitable lodes are expected to be laid open as well as efficient ventilation being given to the western ground. At Bickford's shaft the lode is large, and worth 20s. per fathom. The 70 west is looking very promising, yielding good stones of ore, whilst the lode in the back is worth 20s. per fathom. The lode in the 67 is not so large, but yielding a little tin. A lode in the back is worth 20s. per fathom. In the 50 west there are two lodes, each worth 20s. per fathom. Other points are looking more promising.—SOUTH ST. IVES: The operations which are going on here are of a very encouraging character, although at present limited until the most efficient spot for the engine-shaft is selected, still the lodes are opening larger and more productive.

EAST WHEAL LOVELL.—The new engine-shaft is completed to the deposit of tin left at the diagonal shaft, where it is worth 100s. per fathom, and as soon as the pitwork is completed the sinking will be resumed, and opening east and west on that course of tin commenced, as well as cross-cut to intersect the south lode, which are only 7 fms. apart. The lode at the south shaft is still valued at 90s. per fathom. The men are now engaged in putting in and fixing the lift to the 30. At the Turnpike shaft the lode continues to maintain its value and importance, and the operations during the week have disclosed stronger views of some great discoveries shortly coming off at this valuable part of the mine.—SOUTH LOVELL: The lode at the north shaft continues to maintain its character and value, being worth 25s. per fathom. The water having receded will enable them to resume the clearing and sinking. All other places are looking as well, if not more promising, than last noticed. A portion of the new engine has been delivered on the mine, and the remainder is promised by the end of the week. This promise is important, as it will facilitate the erection of the engine and the water drained, which may be expected in eight weeks, so that sales of tin will be commenced and continued with regularity from the varied sources which have been, and continue to be, opened as the mine is developed.

GREAT WHEAL VOR.—This mine continues to maintain its vast importance; and from recent improvements, and the immense quantity of tin ground reserved, will keep up the present returns probably for years, independent of discoveries contingent on ordinary workings. From a recent inspection the following valuations have been given:—Lode Frey's shaft, 200s. per fathom; 162 east, 200s.; 162 west, 200s.; 157 east, 200s.; 157 west, 200s. The winz in the bottom of the 147 east is worth 30s. per fathom. The lode in the 184 west of Metal shaft, is worth 60s. per fathom; the 174 west, 25s.; the 174 east, 50s.; the winz in the bottom of the 174 east, 60s.; and in the rise from 150s. to 180s. per fathom. The rise in the 162 west is valued at 200s. per fathom. There are six steps in the mine that will average 40s. per fathom. There are fifteen places in which the chief operations are being carried on, which will average 110s. per fathom (with the exception of the stope). Slight changes occasionally take place in the cheapest shares, and in its infancy as to price, whilst Great Laxey has advanced already from 4s. to 18s., and looks as if it would decline more, there being always a limit to an advance, whatever the merits of the stock; besides that, holders of Great Laxey will be realising profits (if they are wise) from time to time, and so keep the shares in a position rather to decline than advance.

REDOLE-AUR is really taking a high position, and must henceforth command more attention. A general meeting was held on the 27th, when the report was highly satisfactory, and a call of 2s. per share was made. Another sampling of the mine will take place in February. The following, however, received this day (29th), is still more important, and will speak for itself.—The 70 end, driving north-west on the Brynia vein, is more congenial for lead, at present producing about 7 cwt. of ore per fm. The end driving west, on the Bell Gwyn, will yield full 10 cwt. per fm. The east end is still poor, but looking very kindly, although not yielding sufficient to value. The winz sinking below the 70 is looking very promising, and yielding 12 cwt. to the fathom, and, on the whole, I have not seen the mine looking so well as now.

The general business of the market is fair, but not overwhelming, the activity being produced by a few new discoveries, which have induced the secretary to issue a report, dated the 27th, to all the shareholders, a copy of which may be had by non-adventurers of the

writer. NORTH CHIVERTONS are extremely steady, and the mine gradually improves: no safer share to buy. EAST RUSSELL, from 4½ (call paid), rose to 5½, but are now a good deal of dividends, and a standard stock, and advancing. NORTH TREKERRIES have risen to 2½. Dividend tin shares are flat, and must remain so, in consequence of the depressed state of the tin market. EAST BASSET are worth buying, as an investment, at any price under 50s., it being reported that the next dividend will be, as usual, 2s. per share for the two months. That once celebrated stock, WHEAL LUDCOTT, went into a decrepitude personated by 5s. per share, but are now 10s. to 12s. 6d., and felt to be bad. The CHIVERTON and WEST CHIVERTON are flat, but without apparent cause, the reports being good. The writer would enlarge but for the pressure of the account-day on his time. Money will be cheaper, and business on the Stock Exchange, of all kinds, exuberant, after the turn of the year, whilst at present the business doing there is by no means on a small scale.

From Mr. EDWARD COOKE:—The market has been moderately active during the week. No doubt in a few weeks there will be more activity generally. Several of the more important mines are just now looking well, and likely to continue a good rate of dividends, notwithstanding the comparative low price of metals. FRANK MILLS have risen considerably in price, and several other mines will follow in the same direction, and the public will do well to make a selection before the price advances to a point that will not leave much margin for profit. I named a few mines last week that were eligible for investment, and it will be seen that my selection was sound. Some have already risen in price, and the others will certainly follow, in my opinion, not from any market operations, but solely upon their intrinsic merits. I consider that EAST LOVELLS, having maintained their price very fairly during the past few weeks, are very likely to have a rise in price now that the shaft is completed, and large returns can be made. The low price of this metal does not so seriously affect the profits of this mine as it does that of many others, owing to the rich quality of its tin, and the moderate cost of returning it. An encouraging feature for the market is the rise in the standard for copper ore this week.

From Mr. WILLIAM LEBLANC:—For the reasons given in my Address to my Friends, in another column of the Journal, I offer no particular observations or advice on mining affairs to-day, further than in reference to the MARGARY Mines, a meeting of shareholders in which was held at Liverpool, on Thursday, when they wisely resolved to make a call of 2s. per share, in order to pay off the liabilities, and to produce a sufficient sum to carry on the works until they begin to send their ore to market. I need hardly say that the reports and statements of accounts afforded the utmost satisfaction, the certainty of the alleged discovery in the bottom of the 70 being beyond all doubt. I have already said that the shareholders in this mine have fallen upon unusually good fortune. An enquiry was last week made in the Journal as to the possibility of reconciling the alleged great discovery in the mine with the fact of so many shares being advertised for sale. But what is there stated as a great mistake, as might have been ascertained on application at the office. There are very few shares, indeed, to be had; and for myself I may say that I should be glad to add to my small number by purchasing at a trifling margin for selling.

FOREIGN MINING AND METALLURGY.

The situation remains without material change in the Haute-Marne, but with a great tendency to a revival in iron. For some time past the works of this group have only succeeded in "placing" their fabrication from day to day, and prices have been scarcely remunerative, although no embarrassing stock has accumulated in the warehouses. In this state of affairs the works are prepared to profit from the first augmentation which may make itself felt in the demand, and it is this greater demand which now shows itself. The indications of an extended demand are at present only observable, but it is hoped that in a few days the movement will become more decided, and then greater animation and higher prices will follow. Merchants' iron is in good demand at St. Dizier, but it is remarked that orders from Paris have for some time past singularly fallen off. Large orders have especially arrived for axes, &c. The market for pig remains in a sluggish state, and it is argued that if the group of the Haute-Marne wishes to preserve or to increase its importance, it is towards a fabrication with coke that its attention must especially be turned. To seek the means of rendering this fabrication possible on favourable terms to the forge of the Haute-Marne is the object to which the efforts of the local foremen are now tending. Charcoal-made refining pig is quoted nominally at St. Dizier at 4½, mixed pig, half-coke, at 3½, 16s. to 4½; and coke-made pig, 3½, 12s. per ton. Merchants' iron, from charcoal-made pig, first-class, in warehouse at the works, has made 5s. 16s. to 9s. per ton, with a scale of 4s. to 8s. per ton; sheets, first-class, 9s. 12s. to 10s. per ton, with a scale of 12s. to 16s. per class; and special irons, first-class, 8s. 16s. to 9s. per ton, with a scale of 4s. to 8s. per class. Ordinary axes have made 10s. 16s. to 11s. per ton. At Maréville we find English iron quoted at 9s. 4s., and the local iron at 4s. per ton. English pig has made 4s. 8s. per ton. M. Fournet has found in the valley of the Roches, a species of the Val-d'Ajol, in the Vosges, chromic oxide, enclosed, in small lots, in an immense vein.

Mr. J. Taylor and Mr. R. Taylor, engineers-in-chief to the Pontgibaud Mining Company, have just presented to the shareholders in that undertaking their annual report on the state of its mines, and also of the Pontgibaud foundries, while they also enter into some speculations as regards the future. With respect to the Roure concession, Messrs. Taylor state that some changes necessary in the machinery for draining the southern part of the mine have been executed, and will involve a considerable reduction in the working expenses. The new engine established on the Richard pit easily pumps all the water, and renders useless the two engines employed at present at this pit, and at the St. Marie pit. An extension of the southern shaft has been made, and the installation of a steam-engine obtained from the Richard pit has been commenced with all possible activity, and will be completed in the course of some weeks. This will enable the management not only to drain off the more considerable volume of water with which they must expect to meet in continuing their work to a greater depth, but also to extract much more mineral than it has hitherto been enabled to produce from this mine. The management has during the second half of the past exercise explored the vein to the 40 metre gallery, and it has found it very powerful, and in some localities very rich. An extension of the southern shaft has been made, and the installation of a steam-engine obtained from the Richard pit has been commenced with all possible activity, and will be completed in the course of some weeks. This will enable the management not only to drain off the more considerable volume of water with which they must expect to meet in continuing their work to a greater depth, but also to extract much more mineral than it has hitherto been enabled to produce from this mine.

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transfer the undertaking into the hands of an English limited liability company, with a capital of 2,000,000. Half this amount is to be subscribed by the English founders of the new undertaking, and the subscription of the other half devolves on the old company and its connection. It is proposed that the shares of the old company shall be exchanged for those of the new, at the rate of four to one. It is extremely doubtful, however, whether this "combination" can be successfully carried through. Losses on works undertaken at Antwerp and elsewhere, and on the realisation of securities accepted in payment for work and labour done, are the principal causes assigned for the embarrassed position in which the plant company finds itself.

On the Havre market, there has been a notable amelioration in Chilian copper, and the sale is mentioned of two lots, deliverable next month (January) at 86½ per ton (Paris conditions). The Paris copper market has been active, and prices have been firmly supported, English making 91½; Lake Superior, 104½; Chilian, 84½; and Corcoro mineral, 84½ per ton. Some small lots of copper have been easily found purchasers at Berlin, and Cologne has been firm. Opinion continues to be favourable to the article on the Hamburg market, and the orders which arrive can be only executed at fully former prices. Far from improving, tin has experienced a fresh depreciation on the Amsterdam and Rotterdam markets. The sale is mentioned of 1000 blocks at 57½ ds., and of 1000 blocks at 57 ds.; the sale has also been noted of 1000 blocks of Hilliton at 57 ds., and of 350 blocks at 56½ ds. At Antwerp some blocks of Banca have sold, to meet the requirements of the day, at about previously quoted rates. There has been little doing in tin at Paris, notwithstanding the low prices of the article; Banca is quoted at 102½; Detroit, at 94½; and English, at 101½. The Hamburg market has been quiet, and without variation. At Cologne the article has been neglected, and has been offered at previously quoted rates; at Berlin, also, the article has been but feebly supported. There is no change to notice in lead on the Rotterdam market, the rates indicated in previous bulletins being supported. At Berlin some tolerably important purchases have been indicated for consumption; Tarnowitz lead has been especially sought for. At Cologne, prices have been firm, and the demand has been tolerably regular. Stettin has remained without change. Hamburg prices are less favourable, lead remaining quiet, with little business, and no altered prices. The Paris zinc market has been very quiet, rough Silesian remaining neglected at 22½ ds. per ton. During the last week transactions in zinc have been limited at Breslau; orders for speculation absolutely make default. At Hamburg zinc remains without animation, present prices leaving no margin for the foreigner.

FOREIGN MINES.

ALTEN and QUENANGEN MINES.—Estimated produce for Nov.—			
Mines.	Ore.	Per cent.	Copper.
Quenangen	Tons 100	7	7-000
Ralspas	10	5	0-800
Old Mine	120	4½	5-700
United Mines	12	4½	0-540
Total	Tons 242		14-040

QUENANGEN.—The 10 fm. foot-stope, on lode E, yields about 3 tons of ore per fm., and looks very kindly in the western breast. In the tribute workings below the 30, the prospects continue very kindly, and in the ensuing month we propose working there on a more extended scale. The shoot of ore below the old east is of tolerable quality, but rather short—3 fms. long! There is still a good ore lode in the pitch at C Mine, worth fully 3½ tons per fm.; the matrix consists chiefly of quartz and calc spar, and looks very promising in the bottom. At Cedam Mine the stoping has been mostly confined to the west side of the opening, being the most sheltered. Considering the great width of the lode, and the second level, east of same shaft, has opened a splendid vein of workable ore of the poorer quality, as was the case near the surface. At the other discoveries in this district but very little has been done of late, owing to the inclemency of the weather.—At Ralspas the branch of purple ore in the bottom of the 20 is improved, being 4 in. wide, and appears to be widening as we progress. The old stoping turns out about 1½ ton of ore per fm., where the lode is about 1 ft. wide, but rather irregular. In searching for this same lode in the 10, we have met with a small but very kindly branch of ore, in a congealed stratum, which we shall begin opening on without delay. In the Old Mine, in the 5 fm. level north, a strong east and west facing has been met with, about which the ground is much easier for progress, and also contains a greater intermixture of saving work. We have completed the branch of railway northward, and are now enabled thereby to manage the stuff easily. In other parts of the mine there is but little change. This remark may also be applied to the small concerns, where the usual number of hands are engaged.—C. TREKERR.

ALAMILLOS.—Dec. 17: The lode in the fourth level, east of San Juan shaft, continues small and unproductive. In the third level, west of San Martin shaft, the lode contains sulphate of barytes and small stones of lead. The lode in the second level, east of Taylor's shaft, is very large and open, and worth 4 tons per fathom. The second level, west of same shaft, is opening a valuable piece of ground, worth 4½ tons per fathom. The second level, east of Navarro's winz, has fallen off in value since our last report, and is now worth 1 ton per fathom. There are old workings in the back of the second level, west of La Madeleine shaft, with sound ground in the bottom, where the lode is of the same quality, and second level, east of same shaft, has opened a splendid vein of workable ore of the poorer quality, as was the case near the surface. At the other discoveries in this district but very little has been done of late, owing to the inclemency of the weather.—At Ralspas the branch of purple ore in the bottom of the 20 is improved, being 4 in. wide, and appears to be widening as we progress. The old stoping turns out about 1½ ton of ore per fm., where the lode is about 1 ft. wide, but rather irregular. In searching for this same lode in the 10, we have met with a small but very kindly branch of ore, in a congealed stratum, which we shall begin opening on without delay. In the Old Mine, in the 5 fm. level north, a strong east and west facing has been met with, about which the ground is much easier for progress, and also contains a greater intermixture of saving work. We have completed the branch of railway northward, and are now enabled thereby to manage the stuff easily. In other parts of the mine there is but little change. This remark may also be applied to the small concerns, where the usual number of hands are engaged.—C. TREKERR.

LINARES.—West of Engine-Shaft—South Lode: The lode in the 110, west of No. 138 winz, is very wide, chiefly composed of carbonate of lime and lead ore, and the latter is worth 1½ ton per fathom. In the 95, west of No. 136 winz, the lode is very small and hard for driving. The lode in the 61, west of Santana's winz, is very large and strong, containing quartz, calcareous spar, and lead, worth for the latter 4 tons per fathom. The lode in the 51, west of Crosby's shaft, has fluctuated considerably since our last report.—East of Engine-Shaft: The lode in the 110, east of engine-shaft, continues small, and very hard for driving. In the 95, east of No. 135 winz, the lode is of an open and promising appearance, but does not contain lead enough to value. The 85, east of No. 134 winz, is much improved, and is now opening tribute ground worth 1 ton per fathom. The 75, east of No. 144 winz, is large and strong, and contains a good deal of gossan, soft granitic, carbonate of lime, and lead ore, worth for the latter 1 ton per fathom.—North Lode: The 85, east of No. 132 winz, is passing through a hard bar of unproductive ground.—Shafts and Winzes: In Crosby's shaft the men are working regularly, and making moderate progress. The lode in San Jose shaft is very large and ugly, containing very large stones of lead, worth 2 tons per fathom. The water is not yet drawn out of No. 143 winz. In No. 145 winz the lode is large, and of a promising appearance. Santo Tomas engine-shaft is commenced for the 120 fm. level. The granite is very close-grained, and hard for driving.

FORTUNA.—Dec. 17: Canada Inco's—West of Taylor's Engine-shaft: In the 100, west of O'Shea's shaft, the lode is very wide and irregular, yielding 3 tons per fathom. The lode in the 90, west of Zamora's winz, is very strong, and of a kindly appearance. In the 80, west of Henry's shaft, the lode is small, and ground very hard. The lode in the 70, west of Henry's shaft, is of a very kind appearance, but has fallen off in actual value since our last report. In Kennedy's shaft the lode is improving, and looks very promising. The rise in the back of the 70, against Geron's winz, is rather difficult to excavate. Nansa's winz is going down in a compact and firm lode, worth 1½ ton per fathom. The lode in Solina's winz has a very promising appearance, and is worth 1 ton per fathom. We have commenced sinking El Clavel's sump-winz for the 110 fm. level.—Los Salido's Mine: The 75, west of Sanchez's winz (now west of Giminez's winz), is bored to Giminez's winz; the ground is hard, and the lode small. The lode in the 55, west of Buena Amigos shaft, has greatly improved, worth 1½ ton per fathom. In the 55, west of San Carlos shaft, the lode is of an open and promising character, worth 1½ ton per fathom. The lode in the 45, west of Millan's winz, continues small and poor.—East of Engine-shaft: In the 90, east of Pintado's winz, the lode is looking more favourable. The 75, east of Delgado's winz, is passing through a large and strong cross-course. The lode in the 65, east of Viciana's winz, is divided into two strong productive branches, worth 3 tons per fathom.—Shafts and Winzes: Giminez's winz is bored to the 75. The lode in Castilla's winz is diminishing in value. There is still a good lode in Roque's winz, but in the bottom it is getting very small. Bartolo's winz is situated west of San Carlos shaft, and in advance of the 55 fm. level.

RHENISH CONSOLS.—G. Sweet, Dec. 24 Bleibach: In consequence of the severity of the weather the last and wheels are frozen to such a degree that it is impossible to keep the engines working, and the frost was never more intense than at this time, consequently the shafts are for the present idle, but I trust it will not long remain so. As soon as the engines do resume working we shall extend cross-outs towards the lodes from the bottom of both Astley's and Wright's shaft. Wright's shaftmen are now engaged in making preparation for sinking a winz on the north lode, and Astley's shaftmen have commenced stoping the back towards the end on Christiana lode. The end driving west on Bleibach north lode is improved, there being a good branch of ore on the footwall. The stopes are looking pretty well.—Fahenberg: The engine-shaft is 12 fms. below the adit level, and the lode is presenting a better appearance than I have seen it since we commenced sinking; but the water is increasing, and I am afraid we shall not be able to sink much deeper with the means employed. In cross-cutting the side of the level on the east and west lode we find occasional spots of ore, but not to value. The stopes on this side are somewhat improved.

SILVER MINING COMPANY OF NORWAY.—T.

leaders of blende up and down the end. We have not yet intersected the cross-course. The tribute throughout the mine is now constant since our last cut. We put in the new balance-rod at surface on Saturday last, so that we are in first-rate working order.

WEST BASSETT.—**A. Noy Roberts,** Dec. 24: The ground in Lamb's shaft, sinking below the 39 ft. level, is favourable; good progress is being made in sinking. The ground in the 39 ft. level north, on west side of the road, is full of killass and muddle; good progress is being made in driving this level; the ground is moderately easy for driving. The lode in the 36 ft. level, north of shaft, continues large and strong, producing good stones of lead and blende. Other places without change.

WEST BASNETT.—**W. Roberts,** Dec. 28: All our operations are progressing favourably, but without any improvement in the tutwork bargains to notice since my last visit. We have sampled this morning (computed) 373 tons of ore.

WEST BASNETT.—**W. Roberts,** Dec. 27: The rise in the rise in the back of the 162 west contains iron, quartz, calais, and muddle, and will yield 14½ wt. per ton. The 162 west continues to yield 16½, worth 50 s. per fathom. The 162 east, carrying 162 west continues to yield 16½, worth 50 s. per fathom. The part of the lode being cut into in No. 5 cross-cut contains iron, capel, quartz, and a very copper ore-saving work. There is no change in the other points.

WEST WHEEL TOLGUS.—Dec. 28: Taylor's shaftmen have taken down a portion of the lode, 5 ft. wide.—This yielding 3 tons of ore per fm. for length of shaft (14 ft.). It is too large the lode we cannot say. The lode in the 78 west is 5 ft. wide, producing fully 5 tons of ore per fathom. The 81 east is yielding 4 tons of ore per fm., looking better than when last reported. In the 65 west the lode is 5 ft. wide, and looking much better than when last reported, now producing 4 tons of ore per fm. In the winze sinking below the 65 west the lode is 4 ft. wide, yielding 4 tons of ore per fm., and looking well for the 75, coming towards it. The stops in back of the 65 east, and the stopes in back of the 69 west of shaft, are each producing 2 tons of ore per fm.—North Lode: In the 65, east of Taylor's engine-shaft, and east of the cross-cut, the lode is 15 in. wide unproductive. The stopes over the back of the 65, east and west of the rise, are each producing 3 tons of ore per fathom. The ground in the 50 fm. level cross-cut north is moderately easy.

WEST WHEEL VOR.—J. Southey, Dec. 28: The ground in Gundry's engine-shaft below the adit level is still favourable for sinking. No alteration in the adit cross-cut was seen.

WHEAL AGAR.—**W. Roberts,** Dec. 27: The following tutwork bargains were set on Friday, Dec. 28: Driving the 110 cross-cut, south of Windatos' shaft, by six men, at 20f. per fathom. Sinking western engine-shaft below the 100, by six men, at 25f. per fathom. Sinking whim-shaft below the 110, by nine men, at 9f. per fathom. Rising in the 90, east of Windatos' shaft, by four men, at 6f. per fathom. Sinking winze in the 90, east of Windatos' shaft, by two men, at 25f. per fathom. Driving the 100 west, south of Windatos' shaft, by two men, at 7f. per fathom. Driving the 100 west, south of Windatos' shaft, by two men, at 27½ s. per fathom. Driving the 90, west on Dobree's lode, by four men, at 4f. 5s. per fathom. Drilling the 90, east of cross-cut, by two men, at 6f. 10s. per fm. Driving the 80, east of whim-shaft, by four men, at 4f. 10s. per fathom. Driving the 60, east of cross-cut, by two men, at 5f. 10s. per fathom.

WHEAL CREBOR.—J. Gifford, Dec. 27: Saturday being our setting-day, the following bargains were set:—The 96 west, by six men, stent 4 fathoms, or cut the cross-cut, at 4f. 10s. per fathom; the lode we are carrying is poor, but I think there is more lode underlying south, which is a little better than the rest, and by driving south on each side of it. The stopes in back of the 96 west, by six men, stent 6 fathoms, at 3f. 5s. per fathom, and to have 4f. 10s. for taking a piece of lode in the drive, and putting in a stall; lode worth 20f. per fathom. The 96 east, by six men, to drive by the side of lode, stent 4 fathoms, at 4f. per fathom; lode 6 feet wide, composed of capels, quartz, and muddle, with copper ore intermixed throughout. Although not enough to value, we are saving it for dressing. This is a very kindly point. The stopes in the bottom of the 84 east, west of Hoskin's winze, by four men, stent 4 fathoms, at 2f. 10s. per fathom; lode 15 ft. wide, yielding 15½ wt. per fathom. The 84 east, by four men, stent 4 fms., at 4f. per fathom; lode 1¼ ft. wide, yielding saving work and likely improve. The cross-cut south in the 96, by four men, stent the month, at 4f. 5s. per fathom. The 73 west, by four men, to carry all the lode, stent 2 fathoms, at 7f. 5s. per fathom; lode 5 feet wide, yielding 2 tons of ore, worth 10f. per fathom, with every appearance of improving. The 48 east, by six men, stent the month, at 4f. per fathom; this end is about 25 fms. behind the first shoot of ore met with in the 72, with whole ground to surface. A pitch in the back of the 84, east of the shaft, by two men, for two months, at 8s. in 1f. Cock's shaft, by four men, stent 4 fms., at 4f. 10s. per fathom; lode 15 ft. wide, yielding 15½ wt. per fathom. The 108 fm. level west, by the beginning of February, the lode is settling down, its size and kindly appearance, but in consequence of its going down some commensurate we are not carrying much of it in the shaft.

WHEAL EDWARD.—G. Rowe, Dec. 24: The lode in the 61 west is 3 ft. wide, composed of capel and spar, intermixed with yellow copper ore of good quality. The stopes in bottom of the 61 east are progressing as fast as the nature of the work will admit.

WHEAL EMMA.—T. Bennett, Dec. 28: The stopes at the 80 fm. level, east of shaft, will yield 14½ wt. per fathom; this looks well for the future development of the mine in fact. We had hope to sink up in the back of the 46 fm. level, east of shaft, and have set the ground east and west of the same to stoops. No. 1 stoop will yield 2 tons per fathom, and No. 2 stoop ¾ ton per fathom. The 34 fm. level end produces 1½ ton per fm., and the rise going up in the back will yield 2½ tons. We shall sample to-morrow, unless the frost prevents the dividing of the ore, 176 tons, which are now on the doors at Plymouth.

WHEAL GRENVILLE.—G. R. Ogden, W. Bennetts, Dec. 24: The lode in the 120 west is small, but which yields a little tin. The lode in the 110, east of new shaft, is 2 ft. wide, and yields 1 lb. below the 96, where, thereby indicating change. The lode in the 110 west is 2 ft. wide, producing tiny tin. The lode in the 81, east of new shaft, is 2½ ft. wide, and producing good work for tin, worth 12f. per fm. The lode in the 100 east is 2½ ft. wide, and producing good work for tin, worth 12f. per fm. A stoep in the back of this level is 90 east is 3 ft. wide, and yielding tiny work, worth from 8f. to 10f. per fm. Two stopes above this level—one worth 15f. and the other 5f. per fm. The lode in the 90 east is 3 ft. wide, and yielding tiny work, worth from 8f. to 10f. per fm. Two stopes in the back of this level are worth 12f. per fm. Each. The lode in the 90 west is 3 ft. wide, and yielding tiny work, worth from 8f. to 10f. per fm. In a stoep in the back of this level the lode, which has been raised up, is 3 ft. wide, and yielding 1½ wt. per fathom, and No. 2 stoop ¾ ton per fathom. The lode in the 66 west is 3 ft. wide, yielding tiny work, worth from 8f. to 10f. per fm. The lode in the 66 west is 3 ft. wide, yielding tiny work, is large, and yielding good plainly work: we make making progress with the rise, and can hear the men working very tinny in the shaft. We hope, therefore, to lose this very speedily.

WHEAL GRYLLE.—E. Rogers, J. Pope, Dec. 29: Fisher's Lode: In the 40, east of Anne's engine-shaft, the lode is 3 ft. wide, worth 10f. per fathom. In the 40, east of the back of the 30, east of Grylls whim-shaft, the lode is small and unproductive. In the 10, driving west of Jones's whim-shaft, the lode is 1 ft. wide, producing stones of tin, but not sufficient to value.—Standard Lode: In the 10, driving west of the western shaft, the lode is a little improved, worth at the present time 3f. per fathom. In the 15, east of Badger's shaft, the lode is 6 in. wide, worth 2f. per fathom.

WHEAL HARRIETT.—S. Williams, Dec. 24: The shaftmen have been driving a cross-cut north at the 150 to cut the north part of the main lode. The lode in the 130 east is 2 ft. wide, worth 10f. per fathom. The lode in the 115 west is 2 ft. wide, worth 10f. per fm. The north lode, in the 115 west end, is worth for copper ore 8f. 6d. The 115 east end, from western cross-cut, is unproductive. The ground in the 115 north cross-cut is favourable for driving.

WHEAL HOPE.—D. Rees, Dec. 26: In the 85 east the lode is 2 feet wide, saving work, but not enough to value. In the 65 west, driving on the north part, the lode is 2 feet wide, worth 4f. per fathom. In the 40 east end, 10 fathoms east of shaft, ground is taken away; 1 hope in four or five days to see them. The tribute pitches are looking better.

WHEAL KITTY (St. Agnes).—Wee, Fokkinghorne, S. Davey, Dec. 24: In the 82, driving west of Holgate's shaft, we have no chance to notice.—Pryor's Lode: In the 65, driving east of new shaft, the lode is not quite so good as when last reported, now worth for tin 7f. per fm. In the 65, driving west of shaft, the lode is 4 ft. wide, worth for tin 22f. per fm. In the 54, east of shaft, we have just met with the lode to the south of the cross-course, and hope to give its size and value in our next. In the 54, driving west of shaft, the lode is 3½ ft. wide, worth for tin 12f. per fm. In the 44, driving east of shaft, the lode is 3 ft. wide, worth for tin 9f. per fm. In the 34, driving west of shaft, the lode is 3 ft. wide, worth for tin 12f. In the 24, driving west of shaft, the lode is showing a better appearance than for some time past, worth for tin 8f. per fm.

WHEAL MARGERET.—R. James, W. Rogers, Dec. 29: We sampled on Tuesday last (computed) 355 tons of copper ore, of usual quality. Our tribute setting, which came off on Tuesday last, is as follows:—Four men at 6s., four ditto at 6s. 8d., sixteen ditto at 8s., eight ditto at 9s., four ditto at 10s., four ditto at 11s., ten ditto at 12s., and six at 14s.; total, 96 men at tribute, making an increase of 5s. ten on the last two months.

WHEAL MARY ANN.—Ferry, Johnstone, C. Harris, J. Stevens, Dec. 29: Clymo's shaft is sunk 6 fms. under the 200 fm. level, the cross-cut in this level is extended 4½ fms. towards the lode. In the 190, north of Clymo's shaft, the lode is 1½ ft. wide, worth 5f. per fm. In the same level south it is 2½ ft. wide, worth 11f. per fm. In the 180 north the lode is 2 feet wide, worth 5f. per fm. In the same level south it is 3 feet wide, worth 10f. per fm. In the 170 south the lode is 3½ feet wide, worth 10f. per fm. In the same level, north of Pollard's shaft, we are still driving by the side of the old man's workings, and the pitches are producing much the same as for some time past.

WHEAL NORRIS.—C. Harris, J. Stevens, Dec. 24: The ground in Carter's shaft continues favourable for sinking. We commenced on Friday morning to take down the lode in the 45 end east, but in consequence of a piece of the north side crushing in under the tribute pitch they have been hindered from doing so; I calculate it will take 24 hours longer to secure the ground and clear the stuff, after which the men will resume taking down the lode. And produce in the 35, driving east of cross-cut, still maintains its very kindly appearance, and the new lode a little more ore, but not quite enough yet to call it saving work. In the 35, driving west of cross-cut, there is no change since last report. The 35, driving west, however, is a part of the same old man's workings, and has produced a cross-cut at the 45 fm. level towards the new south lode. No change in the tribute department.

WHEAL SPARNON.—E. Chegwin, Dec. 24: The summer have completed cutting ground for benches

United, 24 to 34; Providence Mines, 32 to 34; South Condurrow, 30a. to 32a. 6d.; South Croft, 12 1/2 to 15; South Lovell, 2 1/2 to 2 3/4; South Tolgus, 28 to 30; St. Day United, 20a. to 25a. 6d.; Stray Park, 13 to 14; West Caradon, 8 1/2 to 9; West Seton, 205 to 210; West Tolgus, 60 to 65; Wheel Bassett, 95 to 100; Wheel Buller, 9 to 11; Wheel Chiverton, 5 1/2 to 6 1/2; Wheel Crebor, 39a. to 41a.; the 72 fathom level east has improved to 2 tons per fathom. Wheel Mary Ann, 13 to 14; Wheel Seton, 19 1/2 to 20 1/2; Wheel Trelawny, 17 to 18. South Darren, 1 1/2 to 2; the mine is reported as looking well, with a course of ore in four levels; the 50 west is worth for copper and lead 12 1/2 per fathom; the 40 west, 12 1/2 per fathom; the 30 west, 25 1/2 per fathom; the 20 west, 10 1/2 per fathom.

On the Stock Exchange there has not been much business done in Mining Shares during the week, but prices generally close firm. The following quotations are officially recorded in British Mining Shares:—East Lovell, 12 1/2; East Wheel Russell, 4 1/2; Great Laxey, 18 1/2; Great Wheel Vor, 32 1/2; East Carn Brea, 6 1/2; East Caradon, 15 1/2; East Grenville, 4. In Colonial Mining Shares the prices were:—Cape, 10 1/2; Port Phillip, 1 1/2; Yudanamutana, 1 1/2. In Foreign Mining Shares the prices were:—Marquitta, 3 1/2; Cobre, 27 1/2; St. John del Rey, 34 1/2; Alamillos, 1 1/2; Montes Aurores, 4.

IRISH MINE SHARE MARKET.—Although "holiday-time" has left us scarcely three full business days, we yet have an important improvement to record in the price of the Mining Company of Ireland shares. It having become known that the directors feel justified to recommend, at the next half-yearly meeting of shareholders, a dividend at the rate of 23 per cent. per annum (or 16s. 1d. per share), in lieu of 22 1/2, as paid the previous half-year, the price forthwith advanced 10s. per share, as from 28 1/2 to 38 1/2. Last week's closing quotation, to 28 1/2, 12s. 6d. for cash transactions, and have continued to improve to 29 1/2, closing firmly. These shares engrossing for the present the attention of buyers, those of other mines, as is usual in our market on such occasions, were temporarily slightly neglected. Consequently, Connoree shares were done at 27s., and Wicklow Copper shares at 12 1/2 to 13s. 6d.; but General Mining Company for Ireland shares advanced from 4 1/2 to 5s. 3d. to 4 1/2 to 5s., leaving off on sale. The *Cork Examiner* gravely announces the "discovery" (?), by a Scotchman, of rich iron ore in the neighbourhood of Limerick. The province of Munster, particularly the districts of the Shannon, has for ages been celebrated for its vast deposits of excellent coal and iron, requiring only capital and proper energy to secure fortunes for the investors and the province.

During the quarter ending December 31, the quantity of copper ore, the produce of Cornwall and Devon, sold at the Cornish ticketing, was 41,322 tons, which contained 2530 tons 4 cwt. of fine copper, and realised 203,245 5s. 0d., being equal to an average of 4 1/2 lbs. 6d. per ton of ore, and 80 1/2 lbs. 6d. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 6185 tons, which contained 989 tons 15 cwt. of fine copper, and realised 85,167 0s. 0d., being equal to an average of 13 1/2 lbs. 6d. per ton of ore, and 86 1/2 lbs. 0d. per ton of copper in the ore. The average produce of the ore sold at the Cornwall ticketing was 6 1/2 per cent., whilst that sold at Swansea gave an average produce of 16 per cent. From this it will be seen that the aggregate sales by ticket were 47,507 tons of ore, containing 3519 tons 19 cwt. of fine copper, and realising 288,412 5s. 0d. The subjoined is a summary of the periodical sales at the Cornwall and Swansea ticketings respectively:—

The ore sold at the Cornish Ticketings was—									
Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.		
Oct. 6....	112 11	6 1/2	£5 2 6	15 11 1/2	3289	211 19	£16,931 9 0		
" 13....	119 7	6 1/2	£5 10 6	15 11 1/2	2403	166 9	13,268 12 6		
" 20....	128 0	6 1/2	£4 8 6	15 9 1/2	4659	261 9	20,603 10 0		
" 27....	122 8	6 1/2	£4 15 0	15 6	3336	204 15	15,860 11 6		
Nov. 3....	119 5	7	£5 11 6	16 0	3049	212 14	16,986 14 6		
" 10....	121 10	6 1/2	£5 3 0	15 10	2575	167 5	13,244 15 6		
" 17....	134 11	5	£3 19 0	15 11	5111	255 2	20,264 14 0		
" 24....	125 16	6	£4 17 6	16 1	3247	196 10	15,769 0 0		
" 31....	123 17	6 1/2	£5 7 6	16 2	3033	198 18	16,293 2 0		
Dec. 1....	123 16	7	£5 16 0	16 8	2144	149 7	12,447 10 0		
" 8....	130 8	5 1/2	£4 14 6	16 4	4650	266 13	21,982 18 6		
" 15....	125 13	6 1/2	£5 2 0	16 4	3826	239 3	19,632 1 6		
Total for the quarter					41,322	2530 4	£203,245 5 0		
Quarter ending Sept., 1864					41,149	2563 18	£211,885 13 0		
Quarter ending June, 1864					37,395	2364 10	£189,659 13 6		
Quarter ending March, 1864					42,464	2591 9	£229,637 10 6		
Total for the year 1864					162,380	10050 1	£834,328 2 6		
Showing a quarterly average of					40,592	2512 5	£205,562 0 6		
Corresponding quarter, Dec., 1863					44,001	2819 5	£228,292 7 0		
Total for the year 1863					173,282	11,121 15	£881,900 17 6		

The ore sold at the Swansea Ticketings was—									
Date.	Stand.	Prod.	Price p. ton.	Per unit.	Tons.	Fine cop.	Amount.		
Oct. 11....	100 16	6	£11 18 0	17 5 1/2	1332	186 10	£15,585 1 0		
Nov. 8....	100 4 6	6	£14 16 12	4 0	1611	1667	240 13 1/2	20,355 13 0	
Dec. 6....	100 4 0	17	£14 15 6	17 5	1393	224 18	19,506 17 0		
" 20....	99 13 0	18 1/2	£15 15 6	17 5	1863	337 13 1/2	29,454 9 0		
Total for the quarter					6185	989 15	£25,167 0 0		
Quarter ending Sept., 1864					6144	927 5	£24,762 17 0		
Quarter ending June, 1864					5241	1607 0	£15,729 14 0		
Quarter ending March, 1864					7620	1104 18	£24,255 13 0		
Total for the year 1864					32430	4627 18	£140,915 4 0		
Showing a quarterly average of					8107	1131 17	£101,228 16 0		
Corresponding quarter, Dec., 1863					8558	1113 19	£97,349 3 6		
Total for the year 1863					43596	6206 0	£251,968 6 0		

At Redruth Ticketing, on Thursday, 3826 tons of ore were sold, realising 19,532 1s. 6d. The particulars of the sale were:—Average standard, 125 1/2 lbs.; average produce, 6 1/2; average price per ton, 5 1/2 2s.; quantity of fine copper, 239 tons 3 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Per unit.	Ore copper.
Nov. 24....	3247	112 11	6 1/2	£5 2 6	15 11 1/2	211 19
Dec. 1....	3033	123 17	6 1/2	£5 7 6	16 2	198 18
" 8....	2144	130 8	5 1/2	£4 14 6	16 4	266 13
" 15....	4650	125 13	6 1/2	£5 2 0	16 4	239 3
" 22....	3826	123 16	7	£5 16 0	16 8	149 7

Compared with last week's sale, there has been a slight decline in the standard. Compared with the corresponding sale of last month, the advance has been in the standard 1 1/2, and in the price per ton of ore 1s. 4d.

The following dividends have been declared during December:—				
Mine.	Per share.	Amount.		
Great Laxey	£0 10 0	£3250 0 0		
Great Wheel Vor	0 15 0	4431 0 0		
Tinroft	0 10 0	3000 0 0		
Dolcoath	0 10 0	2148 0 0		
Clifford Amalgamated	0 12 6	1812 10 0		
West Wheel Seton	4 0 0	1600 0 0		
Wheel Seton	4 0 0	1354 0 0		
Wheel Bassett	0 12 6	768 0 0		
Wheel Trelawny	0 12 6	650 0 0		
Wheel Mary Ann	0 10 0	512 0 0		
Total		£22,753 10 0		

At Tinroft Mine meeting, on Wednesday, a dividend of 3000 (10s. per share) was declared.

At the Maundlin Mines meeting, held at Liverpool, on Thursday (Mr. R. McConnell in the chair), the accounts for the nine months ending November showed a debit balance of 467 13s. 6d. A call of 2s. per share was made. The agents' report was considered of a very satisfactory character, as it holds out great hopes of the mine soon becoming profitable.

At West Great Work Mine meeting, on Tuesday, the accounts for the three months ending October showed a debit balance of 1182 7s. 7d. The arrears of call amounted to 564 17s. 6d. A call of 6s. 9d. (the *pro rata* division of debit balance) was made, and the pursuer ordered to take legal proceedings against defaulters. Captain B. J. Reed reported upon the operations at the mine. The prospects of the mine are encouraging. They have 92 hands employed.

At the Dale Mine meeting, on Tuesday (Mr. J. Procter in the chair), the accounts made up to December showed a profit upon the six months' operations of 350 1/2. The report of the agent (Capt. R. Nines) stated that since the last quarterly meeting the continued improvement in the Pipe vein had enabled them to raise about 132 tons of lead ore, and 100 tons of blende. They would have raised more ore had they not been obliged to sink the new shaft 10 ft. deeper for a trip-plat, to enable them to more readily to discharge the ore, &c., from the wagons, which was now being done by eight men, and also by the new railway, over which the ore was to be drawn by means of the winding-engine, instead of by men as at present. A winze was being sunk from the old top carriage on the Pipe vein to the present bottom works, which was necessary

for ventilation, but would at the same time prove the intermediate ground. These points, now in progress, he hoped to have completed in three or four weeks hence, when the mine would be put to work on ore ground, and to explore the Pipe ground at different points, which up to the present time they had not been able to do to advantage. He hoped to have the new boiler completed in two or three days. The dam was perfectly successful, and they derived the greatest advantage from it, and this would be further increased when the plat, railway, and winze were finished, which, provided the present appearance of the Pipe vein continued, led him to believe that they might fairly calculate to be able to make a good dividend at no distant period. The report and accounts were received and adopted. Mr. James was re-elected director, and the appointment of Mr. W. Ward, as the secretary of the company, in the room of Mr. Dunsford, deceased, was unanimously confirmed. A vote of thanks was passed to the Chairman and directors for the successful manner in which they continued to conduct the company's affairs.

At East Wheel Ellen meeting, on Thursday, the accounts showed a debit balance of 206 1/2 9s. 4d. A call of 2s. per share was made.

At North Wheel Robert meeting, on Wednesday (Mr. Joseph Procter in the chair), the accounts showed a balance of liabilities over assets of 745 1/2, against which there were about 60 tons of copper ore sold (with carriage) for about 360 1/2, and 7 tons of tin, which had been sold for 55 1/2 4s. per ton. A call of 2s. 6d. per share was made. Details in another column.

At the Spear Moor Mine meeting, on Dec. 20, the accounts showed a debit balance of 469 2s. 11d. They have 62 men and 6 boys employed on tatwork and tribute—tribute averaging 14s. in 11.

At East Pool Mine meeting, on Dec. 20, the accounts showed a debit balance of 189 1/2 8s. 2d. Captains Garby, Tamblin, and Maynard, in their report, say:—Although there is a loss shown on the two months' account, it is not owing to any falling off in the prospects of the mine, but to our inability to make a return of the tin. We have begun the erection of a steam-stamp, and are making very good progress with the mason work.

At Tresavean and Tretharup Mine meeting, on Dec. 19, the accounts showed a debit balance of 298 1/2 11d. The unpaid calls amount to 217 1/2. A call of 1 1/2 per share was made. The pursuer was requested to obtain grants of Carvannal and Brear. In sinking a winze in the bottom of the 12 ft. level they have discovered a bunch of gossan ore, worth about 25 1/2 per ton. Being in unwrought ground, presenting exactly similar features to those formerly being on the parallel lode at Trethellan, and the nature and character of the ore being precisely similar to what has been obtained from the tops of the large deposits in this district, Capt. Pope and Odgers are sanguine that they will have to report a continued improvement at this point.

At the Don Pedro North del Rey Mine meeting, on Thursday (Mr. Hayman in the chair), the report of the directors was received and adopted. Details in another column.

At the Nova Scotia Land and Gold Crushing and Amalgamating Company general meeting, on Thursday (Mr. G. L. Brown in the chair), it was stated that the amount of gold remitted during the year was 1080 ozs., representing a nett sum of 4232 1/2. The outlay on general mining account, together with the general expenditure, had been met by the profit on the sale of Wine Harbour property, premium on the issue of the 3569 shares, and by the receipts of gold, to within a sum of 326 1/2 11s. 3d. The report of the directors was received and adopted. Details in another column.

At the Victoria (London) Mining Company (extraordinary general) meeting, yesterday (Mr. H. Moore, M.P., in the chair), it was unanimously agreed that the capital of the company should be increased from 25,000 to 50,000, by the issue of 25,000 shares of 1 1/2 each, to be offered at 1 1/2 each to the existing shareholders. The Chairman mentioned that by increasing the capital the basis of operations could be extended, and in all probability larger profits made. The profits made during the current year exceeded 10,000, and the investments made were valued by Mr. Bland (the resident director) at over 30,000, after making a liberal allowance for those in a progressive state. The details of the meeting will appear in next week's Journal.

At the Wallachian Petroleum Company extraordinary general meeting, on Wednesday (Mr. Pulling in the chair), a resolution was passed confirming the special resolutions passed at an extraordinary general meeting (held on Dec. 6), authorising the increase of the company's capital by the issue of 8000 shares, of 10 1/2 each, 4000 of which are to be entitled to a preferential dividend of 7 1/2 per cent. per annum, and 4000 to carry out the modified arrangement with the grantees.

At the El Chico Silver Mining and Reduction Company meeting, to be held on Saturday (this day), the report to be presented will state that the San Pascual hacienda de beneficio has been legally assigned to the company, and the directors believe that when more fully supplied with ore the profits cannot fail to be considerable. With respect to the silver mine of San Juan de Bayas, situated in the immediate neighbourhood of the hacienda, the directors explain that, in consequence of the dilatory nature of all law proceedings in Mexico, evils aggravated in the present instance by the sudden deaths of two of the vendors, involving in each case a long series of legal formalities, the completion of the transfer of this property had been serious and unexpectedly delayed; the *testimonio* is, however, promised by the English packet. The directors, therefore, with the intention of making the earliest possible return to the shareholders, have deemed it advisable to forward a remittance to Mexico, with instructions to their agent to commence operations at once on the mine, and they now look forward with confidence to the ultimate realisation of the objects of the company both as regards the mine and the hacienda.

MR. E. GOMPERS, MINING OFFICES,
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTIONS IN BRITISH AND FOREIGN STOCKS AND SHARES.
Terms, 1 1/4 per cent. Bankers: London and Westminster Bank.

MR. J. W. GILBERT, MINE SHAREDEALER,
1, PINNER'S COURT, OLD BROAD STREET, LONDON.

WILLIAM BARTLETT, MINING SHAREDEALER,
No. 2, BUCKLESBURY, LONDON, E.C.
(Member of the Mining Exchange).

Has SPECIAL BUSINESS in the following shares, either as BUYER or SELLER at close market prices:—

Clifford Amalgamated.	Bedford United.	Ilogan.
Great Wheel Vor.	Cargill.	Bryn Gwlog.
Nanglies.	Carn Camborne.	Wheel Rose.
Great Laxey.	Carnbome Vean.	Bryntal.
East Bassett.	Drake Wails.	Calvadnock.
Wheel Seton.	East Rosewarne.	Wh. Ludcott and Wrey.
East Caradon.	Hallenbeagle.	Bedol-Aur.
East Lovell.	Hington Down.	Buller.
Chiverton.	Lady Bertha.	Chiverton Moor.
Cook's Kitchen.	Long Rake.	Minera.
East Wheel Vor.	North Devon.	Basset and Grylla.
East Carn Brea.	North Wheel Croft.	Quebrada.
East Wheel Grenville.	North Shepherds.	North Roskear.
Wheel Grenville.	New Seton.	East Laxey.
North Treskerby.	North Chiverton.	Great Caradon.
Wheel Crebor.	South Darren.	Prince of Wales.
West Chiverton.	South Croft.	Tolvaaden.
East Russell.	West Caradon.	Yudanamutana.
Wheel Seton.	West Vor.	Condurrow.
Marke Valley.	Frank Mills.	South Tolgus.
Kelly Bray.	Wheel Margaret.	Ding Dong.
Gardiner.	Yale of Towr.	East Snafell.
Wheel Mary Ann.	Great Wheel Bussy.	East Wheel Agar.
Great South Tolgus.	Wheel Bassett.	North Hallenbeagle.
Trelawny.	South Condurrow.	Stray Park.
Tinroft.	Boscawen.	South Phoenix.
St. Day United.	Crenver Wheel Abraham.	South St. Ives.
Wheel Kitty (St. Agnes).	West Wheel Jane.	South Caradon Hooper.
Wheel Ida.	St. Ives Consols.	Silver Yeln.
East Treskerby.	Wheel Currie.	Levant.
Wheel Emma.	Wheel Caradon.	Alderly Edge.
East Providence.	Bottle Hill.	Bronfroyd.
North Wheel Bassett.	Basset and Grylla.	East Wheel Grylla.
Pendean.	East Seton.	North Pool.
South Caradon.	Devon Great Consols.	Great Wheel Bussy.
Great Fortune.	New Birch Tor & Vitrifer.	Great Wheel Metal.
Herodotus.	Wh. Kitty (Uny Leland).	Nant-y-Iago.
West Wheel Seton.	Wicklow.	New Clifford.
Providence.	Condurrow.	New South Caradon.
Wheel Harriett.	Rosewall Hill.	St. David's.
South Lovell.	South Wheel Frances.	Spear Moor.
Grambler and St. Aubyn.	Wendron Consols.	West Fowey Consols.

MR. WILLIAM BARTLETT is in a position to advise as to what stock should be bought for a great rise in price within the next few months.

Telegrams promptly attended to.—Bankers: Alliance Bank, Lothbury.

MATTHEW GREENE, STOCK AND SHAREDEALER,
9, ORANGECHURCH STREET, LONDON, has received instructions to SELL the FOLLOWING SHARES, nett price, and free of commission:—

5 East Caradon, £16 1/2.	5 West Grenville, £4 1/2.	5 East Lovell, £12 1/2.
20 Crebor, 40s.	20 East Rosewarne, £2 1/2.	20 Great South Chiverton.
10 East Grenville, £4 1/2.	20 East Laxey, £2 1/2.	8 Snafell, 25s.
	5 Great Laxey, £18 1/2.	

And is a BUYER of Yudanamutana, North Treskerby, and Kitty (St. Agnes). Investments in the following mines would be certain to pay well at present prices, viz. 1—New Clifford, 2s.; Great Laxey, £18 1/2; East Laxey, £2 1/2; East Snafell, £2 1/2; and North Treskerby, £2 1/2.

Bankers: Imperial Bank, Lothbury. Commission 1 1/4 per cent.

MR. G. D. SANDY, SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C.

A selected list of bona fide shares for investment forwarded gratis. Current Daily Price List may be obtained as usual.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

MINES INSPECTED and faithfully REPORTED ON. DEALER IN MINING, RAILWAYS, and OTHER SHARES.

His monthly Circular forwarded on receipt of six postage stamps. Wellington Chambers, 75, Cannon-street West, London, E.C.

MR. J. P. ENDEAN, STOCK AND SHAREBROKER,
1, CROWN COURT, OLD BROAD STREET, LONDON, E.C.

Having had 25 years' experience in the mining districts of Devon and Cornwall, and three in the London market, with daily information of important changes from qualified agents, also the most authentic reports relating to other investments, he is in a position to afford the earliest information to his clients, and to direct capitalists whether to buy or sell in mines, railways, or other securities.

Investors should apply to him for reliable information relative to the Chiverton Mines, also the Camborne and Ilogan districts.

A carefully selected list of sound progressive and dividend shares (certain to give a large percentage immediately) forwarded on receipt of 5s. in stamps.

Orders and telegrams receive immediate attention.

COAL MARKET.—On Monday, in consequence of the Christmas holidays, no market was held.—On Wednesday, 23 vessels arrived since Friday, all except two steamers. House coals continued a steady business at last prices. Hartley's a little dearer.—On Friday, 37 ships came forward; a large fleet being looked for on Monday, the demand for coals generally was less active, and prices of all sorts declined about 1s. per ton. Heston Wallend, 23s. 6d.; South Heston Wallend, 23s. 6d.; Hartlepool Wallend, 23s.; East Hartlepool Wallend, 23s.; Braddyll's Wallend, 23s. 6d.; Eden Main, 22s.; Harton Wallend, 21s. 9d.; Gosforth Wallend, 21s. 9d.; West Hartley, 18s. 9d.; Tanfield Moor, 17s. 6d.; 12 cargoes unsold; 400 ships at sea.

THE COAL SHIPMENTS FROM BIRKENHEAD AND LIVERPOOL.—Last year 331,606 tons of coal were shipped from Birkenhead, being an increase of 82,656 tons over the previous year. Of this quantity, 72,000 tons passed over the new mechanical coal shoots, the quantity the previous year being 35,000 tons. The amount of coal shipped from the Liverpool side of the Mersey last year was 100,000 tons.

GREAT WHEEL VOR.—The reports continue of a most satisfactory character. The different points of operation steadily maintain their great productiveness, and the general prospects of the mine seem to improve as the development progresses.

THE TIN STANDARD.—The smelters reduced their prices of metals on Tuesday last, which are now as follows:—Common blocks and ingots, 97s.; ditto bars, 98s.; refined blocks, 100s.; grain blocks, 103s.; fine grain blocks, 107s.; ditto granulated, 109s.; ditto bars, 111s.—Tin has been very much depressed, in consequence of several lots having been forced out, and sales

WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Messrs. WATSON and CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon Mines and Mining, and the state of the Share Market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium published in 1843 Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. Watson and Cuell have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and, from the lengthened experience of Messrs. Watson and Cuell, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt, and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public, that they transact business in the public funds, railways, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are almost daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are enabled to supply shares in all the best mines at close market prices, free of all charges for commission.

BOTTLE HILL is looking much better in the main lode, which is yielding rich work. The sale of tin this week was 5 tons 4 cwt., and the highest price was 56l. 2s. 6d. per ton. When we commenced the mine we got 82l. per ton, so that the drop on this parcel alone is 130l.

WHEAL ALBERT.—The report of this mine, to which we referred a fortnight ago, is favourable, and anyone wishing for a few shares can apply at once. We shall, probably, publish the report in the "Review" of the district; in the meantime, the inspector says—"In conclusion, I must say Wheal Albert is a progressing mine, and will, without doubt, prove very productive when further developed, and that the shareholders will be well paid for their outlay. They have about 50 tons of blende and 9 tons of lead on the dressing-floors."

THE PROGRESS OF MINING IN 1864, BEING THE TWENTY-FIRST ANNUAL REVIEW.

BY J. Y. WATSON, F.G.S.

After having published a full and elaborate Review of mining affairs for nineteen years in succession, I gave out, in 1862, that I could not, for many reasons, undertake such a task again; and my Review of 1863 was as short as it was possible to make it; I also intimated that it would possibly be my last appearance as an annual reviewer; for every year the task not only became more difficult, but more invidious and unpleasant. There are so many individual and private interests at work in mining affairs, and they are at times so antagonistic to public interests, that even to hint at the truth is to bring down upon oneself a torrent of invective and abuse; from this I never flinched, however, in times gone by, when I thought I was in the right, nor shall I in this paper, which I have been induced to write, when things have to be referred to and noticed that the public ought to know.

A few words would sum up the majority of the mining experiences of the year 1864, for they have been, for the most part, to "One and All," particularly so to large holders of stock, made up of disappointment, great losses, disasters, and disgust. Large sums of money, it is true, have been made by a few promoters of new sets around "stars"—or what were supposed to be stars—by taking advantage of "got up" excitement to divide and sub-divide untold "grants," each part being made to represent an enormous premium for the projectors; but without exception these (to which reference will be made hereafter) have proved heavy losses to those who embarked in them, have added to the disgust of the general public, and to the injury of those connected with mining on the market. Many mines, also, upon which large sums of money had been expended, and which showed prospects of doing great things—have proved great and, to us in particular, bitter disappointments. We confess to have been sadly out in many of our expectations and recommendations formed at the early part of 1863, and suffer, perhaps, more than any one else from the way we supported them pecuniarily, and the large interests we have carried on, to our individual loss and annoyance. It is said, however, and very truly, that it is never so dark as just before the dawn; and we hope, therefore, (though "Hope" has been one of our black sheep this year), that the worst features have passed away, and that in 1865 we, and all of us, may reap the rewards of our patience and perseverance, and a salve for our disappointments and losses, in our legitimate undertakings.

A storm, very severe while it lasted, passed over the commercial world in the autumn. Banks failed, involving thousands in ruin, and spreading a train of disasters throughout the length and breadth of the land. A feeling of insecurity and dread was around us, and it is not surprising that those who had anything to lose should button up their pockets, and refuse either to buy, to sell, or to speculate; and when markets are not supported prices invariably fall, so that many persons holding stock that cost them thousands of pounds could not for their immediate wants realise upon it as many shillings, and had to stop payment, and bring down others with them in their fall. This was particularly the case in the markets for colonial and other produce; and was also often painfully the case with holders of mining stock, who found themselves with many "calls" staring them in the face, and no means of realising on shares to meet them; and if we mention these things now, it is only to account, in some measure, for a depression that all deplored but none could prevent, and to express a hope that the worst being over, and money cheap again, we may see a rapid rise ere long in all good things; while for the bad ones, the sooner they are stopped the better. But which are the bad? Well, if we were even to hint at them in this place we should have a nest of something like "hornets" about our ears; but we shall be ready to give any private information as usual, not only as to the "bad," but the good, so far as we are able to judge of them.

In my last Review I remarked upon the great increase in time bargains—that is, speculating for the fortnightly settlement or "account"; and, if anything, the practice has gone on increasing. This, as we have said before, is not mining, but gambling, for which mining has the discredit. People now-a-days speculate to a large extent in this way, in the hope of a "rise in price" before the account or pay day, upon some expected discovery or improvement, or upon some event likely to happen (though no one can tell to a week or two, or a month, when any expected event in a mine will in reality come off); and, when the day of settlement arrives, brokers, agents, and dealers, as the case may be, are requested to "carry over" to another fortnight, and so on, in some cases almost *ad infinitum*, to the great inconvenience of all concerned. This sort of thing also gives great facilities to the "bears," who sell any amount of any kind of stock upon the now well-founded presumption that most of it is purchased merely for the account, and with no intention of being taken up. Their game, therefore, until discoveries do take place, and cause a rise in the market, is a pretty certain one, and that they have had the best of it during 1863 is evident, and they can afford to take the baiting they receive in good part.

When I first commenced writing the Annual Review, 21 years ago, it was considered unsafe to buy a dividend mine for investment, unless it paid

15 to 20 per cent. per annum, or five years' purchase, and this was the general rule in such matters. Now-a-days, however, shares are worked up, so that many do not pay even 10 or 7 per cent., and, consequently, the public, as purchasers, have not sufficient opportunity of insuring themselves against loss. The plan we used to recommend to all purchasers of dividend mines, years ago, was this—supposing a share paid 20 per cent., 5 per cent. only should be spent, and the other 15 per cent. capitalised, thus reducing the original purchase-money annually, until, in seven or eight years, the share would cost nothing. In the early days of East Rose several clients purchased a share in this way, got back all the original purchase-money in dividends, and then 600l. a year for many years for nothing! But a combination of circumstances, to which I need not more minutely refer, renders this almost impossible in the present day.

The maxim that the value of a thing is what it will bring does not always apply when property is so peculiarly subject to market operations as shares in mines, and it may be taken as a general rule for prudent investors not to purchase shares in dividend mines at a price that does not give them at least 10 per cent. for their outlay, unless it be under peculiar and exceptional circumstances, such as the almost certain prospect of increased dividends at no distant date, &c. Devon Great Consols, the safest dividend mine in England, with its enormous courses of ore, and its reserves, exceeding in value 300,000l., pays 10 per cent., taking the price of a share at 600l., the dividends having been this year 63,488l., or 62l. per share. South Caradon, the richest mine in Cornwall, at 500l., pays rather less than 8 per cent., but the shares are chiefly held by local parties, whose confidence in the mine is such that they lay out their money in it when a share is offered, much as persons near London do in the Three per Cents. From its earliest career, and I remember the time when shares, then 64ths, were offered at 5l. each (now 4000l., as the present number is 512), it has been under careful and judicious management, and worked, as all mines should be, legitimately and fairly, and not for market purposes. West Seton pays rather over 10 per cent.; Wheal Seton the same. Frank Mills, if it continues its present rate of dividends (5s. quarterly), and I hear that most likely it will, pays at the rate of nearly 20 per cent. East Basset has paid 22 per cent. this year, but discoveries must be made to keep up dividends at all for any length of time. The Minera Mines, in Wales, have paid dividends this year amounting to 61,200l., or 34l. per share (2200l. less than the Great Devon), which, at the quoted price of 300l., is rather over 10 per cent. The Great Laxey Mines, in the Isle of Man, pay at the rate of rather more than 10 per cent. dividends. These mines were sold to a London company for 40,000l. two years ago, and have since reached a value of 240,000l., the dividends being at the rate of 25,000l. a year, and with a prospect of a continuance. Since April of the present year shares have risen from 5l. to 20l.—the greatest rise during the year; and, according to the reports of the manager of these mines, the great star of 1865 is to be the New North Laxey, its immediate neighbour. When East Caradon shares rose to 55l. per share, the dividends were at the rate of 3l. per share per annum, or under 6 per cent. This year, taking the shares at 20l., it has paid 3l. 18s. 6d., or nearly 20 per cent.; and, notwithstanding present poverty, the mine has fine chances for discovery. In the 60 ft. level, the caunter lode was the longest and richest course of ore in Cornwall, and the agents valued the reserves at 100,000l. And in anticipation of the like courses of ore in the 70 and 80 (which have since proved disappointments), the shares rose as they did. It should be remembered now, however, that the caunter was almost an accidental discovery, and the main objects of the mine, cutting the lodes from which South Caradon derives her great riches—and some of which are near to the boundary of East Caradon—have yet to be accomplished, and before another year the mine may be placed in a much more sound and prosperous condition; and in the meantime the dividends will pay good interest for money. Great Vor, one of the richest tin mines in the county, has paid less than 7 per cent. Dolcoath has paid 15,394l. in dividends this year, or 600l. more than Great Vor. West Chiverton pays 15s. per share quarterly, or 3l. per share per annum, and the price upon this was got up to 85l., the interest being then less than 5 per cent. In Great Vor a rise of 20l. per ton in tin would nearly double the profits, and, consequently the dividends, and the public are paying for this rather in anticipation, while the fact is that a decline in the price of tin is more probable than a rise just now. In like manner, the price of West Chiverton, in which mines there was, no doubt, one of the richest discoveries of lead that had been made since the days of East Wheal Rose, went up in anticipation of largely increased dividends, and upon the presumption that the lodes would be found as rich in the 90 as they were in the 80. The lodes here are rather peculiar; they run parallel to each other, and run into each other east and west, making *one lode* in the eastern and western parts of the mine. The width of these lodes unitedly, and including the intermediate spaces, or horres, is from 4 to 5 fms. They are called Valpy's, Williams's, and Elizabeth's, and all of them have been very rich indeed down to the 80, and, indeed, below it, so far as the winzes have been sunk. The reserves of ore above the 80 are very considerable, and, should the lodes be cut rich in the 90, the returns and profits may be greatly increased. So far, it cannot be disguised that the 90 is a disappointment, but the agent is still sanguine, and it is possible, and highly probable, that a good course of ore may yet be found when the lodes are cut through, and driven upon west, according to the dip of the ore.

[To be continued in next week's Journal.]

No. V., January, 1865, with plates, price 6s. THE QUARTERLY JOURNAL OF SCIENCE.

METAL MINING. DR. J. ANS SMITH, F.R.S.
THE HISTORY OF THE BRITISH COAL MEASURES. EDWARD HULL, B.A., F.G.S.
THE CAUSES OF BRITAIN'S GREATNESS: A REVIEW OF THE RELATIONS OF HER GEOLOGY AND GEOGRAPHY TO HER HISTORY. WILLIAM PENCKEL, F.R.S.
PETROLEUM. PROF. HENRY DRAPER, New York.
THE SCIENCE AND ART DEPARTMENT.
THE MAMMALS OF AUSTRALIA. DR. SCOTTER, F.R.S.
THE ORAL INSTRUCTION OF THE SO-CALLED DEAF AND DUMB. GERARD VAN ASCH, late of Rotterdam.

CHRONICLES OF SCIENCE.
I.—AGRICULTURE.
II.—ASTRONOMY.
III.—BOTANY AND VEGETABLE PHYSIOLOGY.
IV.—CHEMISTRY.
V.—ETHNOLOGY.
VI.—GEOGRAPHY.
VII.—GEOLOGY AND PALEONTOLOGY.
VIII.—MINING, MINERALOGY, METALLURGY.
IX.—PHYSICS—OPTICS, HEAT, ELECTRICITY.
X.—ZOOLOGY AND ANIMAL PHYSIOLOGY.
XI.—SCIENCE IN BRITISH NORTH AMERICA.

REVIEWS.
Entozoa, the Laws of Health, Human Physiology, Man and Nature, the New Zealand Flora, Flora of the British West Indian Islands, the Australian Flora, British and Garden Botany, South African Butterflies, Chemical Analysis, the Astronomical Observer, Sericulture in Oahu.

NOTES AND CORRESPONDENCE.
On the Probable Existence of the repetition of Octaves in the Solar Spectrum. C. HILTON FAGGE, M.D.
On the Vast Antiquity of the Lunar Surface. JAS. NARMETH.
John Churchill and Sons, New Burlington-street.

WHEALE'S ENGINEERS' POCKET BOOK, 1865.
Now ready, roan cloth, gilt edges, price 6s. (postage 4d.).
THE ENGINEER'S, ARCHITECT'S, AND CONTRACTOR'S POCKET BOOK (LOCKWOOD'S, formerly WHEALE'S) for 1865. Considerably improved, with many additions and several new plates. Besides the usual vast mass of useful information, rules, formulae, tables, &c., &c., will be found a Diary of Events and Data, a General Calendar, a Gas Engineer's Calendar and History, Obituary of Eminent Engineers, &c., 1863-4; List of Members of the Institute of Civil Engineers, and of the Royal Institute of British Architects; Tables for the Reciprocal Conversion of British Weights and Measures into the Decimal or Metric System, &c., &c.
Lockwood and Co., 7, Stationers' Hall-court, E.C.

Will be published in the first week of January.
RAILWAY REFORM: ITS IMPORTANCE AND PRACTICABILITY CONSIDERED AS AFFECTING THE NATION, THE SHAREHOLDERS, AND THE GOVERNMENT, with a COPIOUS APPENDIX, containing—

I.—A Popular History of the Rise, Progress, and Contemplated Completion of our Railway System.
II.—The Financial and Statistical History of the Railways of the United Kingdom.
III.—The Railway Reform Bill.
IV.—Mr. Gladstone's Speech on Introducing the Bill in the House of Commons, 8th July, 1844.
V.—The Position and Prospects of the Thirteen Great Companies.
VI.—The Position and Prospects of the Seventy Lesser Companies.
"The roads of a country, from the very nature of things, are public concerns; they are as necessary to a people as the air they breathe."—Second Report of the Select Committee of the House of Commons, 1846.
"Should we live to see fully developed all the powers and energies of this system, so shall we also live to see it recognised as one of the greatest benefits that either art or philosophy has conferred on mankind."—Quarterly Review.
"If I entertained any feeling on the subject of the interference of the Government, it is one of regret that they did not in the first instance take a more active and prominent part, that they did not themselves lay out for consideration what appeared to them the best general scheme for accommodating the traffic throughout the metropolis, without having the slightest reference to this company or that."—Speech of the Earl of Derby in the House of Lords, 12th February, 1864.
London: Longman, Green, Longman, Roberts, and Green, Paternoster-row.

MR. WILLIAM LELEAN'S ADDRESS TO HIS FRIENDS.

GENTLEMEN,—We have not yet sufficiently recovered from the enervating effects of "A Merry Christmas," and have too much on our hands in preparing to enter on "A Happy New Year," to permit of any very serious application to business, even to the limited extent of following those who may be disposed to think and to act for us. One might as well attempt to divert the young ladies from their busy preparation of kisses, and crackers, and Christmas trees, by putting into their hands a homely on prudent homewifery, or the boys from their magic lanterns, and other ingenious inventions of Creamer and Novara, for fascinating the young, by inviting them to a feast of logic, or a dissertation on the science of arithmetic, as to interest almost any of the "discerning public," by expatiating on the value and relative claims of monetary investments, just now. There are times when even "money-making people" are indisposed to make money—that is, just after they have been spending it pretty freely, and especially in the enjoyment of this festive season—"When 'tis merry in the hall, And the birds sing, all."

And this is not for one day, only; for while "Jolly-faced Christmas, he brings us good cheer— Mine'd-pies, and plum-puddings, good wine, and strong beer, With pigs, keese, and capons, the best that may be, The New Year's beginnings with Christmas agree."

People will not be "bored" about business at present; and, but that it would look so ugly and phantom-like, the journals devoted to business might as well come out in blank as with their columns filled with matter that nobody reads, or reads to no purpose. If one wishes to talk or write to any good end, one must adapt oneself to the mood of one's audience, taking care not to subject oneself to the mortification of being told to "go thy way now," with an unmeaning promise of being called for "at a more convenient season." To-day, then, I will only venture to ask my friends and clients, when they have thoroughly recovered their business habits, to glance back over the transactions of the now closing year, and to strike a balance of good and evil—of profit and loss.

In mining matters the year has, upon the whole, been a dull one, especially the latter half of it. The American war has affected the prices of metals as well as of cotton; the difference being that it has sent the latter up and the former down; and the consequence has been, that a good deal of mining work has been done at a very little profit, and some of it at a loss. Nevertheless, many persons have realised more than an average return—some a very large one—from their investments in mining shares, while but few who have used ordinary caution, and have acted on reliable counsel, have those heavy losses to deplore which have resulted from investing in some other plausible and promising undertakings. Gambling in mining shares is as reprehensible as in anything else, but it is mere affectation and prudery to speak in condemnatory terms of all speculation, or buying and selling for the chances of realising an immediate or not very remote profit. I can reflect with some satisfaction on the fact that I have helped many persons to realise largely by what I deem legitimate transactions in this way—buying at a low price and very soon selling at a high one. If one can buy into a mine which is just being developed, with good promises of success, and hold one's shares until the hidden treasure is coming within reach, and then sell at a greatly advanced price—100, 200, 300 per cent., or more, the transaction is a fair one, and none need be ashamed of it. One gives value for the money received, after one has taken the chances of failure, which the buyer will have no reason to be dissatisfied. I might refer to several cases in which this has been done during the past year, and it will be done in the course of the coming year, probably to a still greater extent. There are several mines which are being opened with great promise, but shares in which—as is always the case in mining—may be purchased at a low price. I have directed attention to some of these, for several weeks past. I will not do so to-day, for fear of being "business-like" out of season. My recommendations of last week all stand good for this week, and the reports which appear in other columns, as well as private reports of my own, justify me in speaking of the mines recommended with increased and increasing confidence. My good fortune in anticipating some very profitable results from investing in particular undertakings, during the year 1864, has induced me to devise a new year's gift for the acceptance of those who have given me their confidence. I shall send to each of them a copy of what I believe they will find a most useful companion for the year 1865—an ALMANACK—not the semblance of an almanack, which is a mere vehicle for advertising one's business, but a book worthy of the name it bears, and comprising a mass of most useful and valuable matter, not elsewhere to be found between the covers of a single book. Should I overlook any name I ought to remember, a reminder shall receive a prompt reply, in the shape of my PRESENTATION ALMANACK for the year 1865. 11, Royal Exchange, London, E.C.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journals should be regularly *Aided* on receipt: it then forms an accumulating useful work of reference.

WOLFRAM.—Can any of your correspondents inform me of the commercial value of Wolfram, and where a market can be obtained for a quantity?—E. S. C.: Plymouth, CAMBERLAND GOLD COMPANY.—Why do the directors continue to defer the convening of the general meeting, which should have been held three months since? Is it because they are anxiously waiting for the attainment of some object at present known only to themselves, or, on the contrary, does it arise from the fact that they are unwilling to confront the shareholders, by reason of the unpromising condition of the company's property?—A. B. C.

ENFORCED SYSTEM OF GEOLOGY.—The letter of "Y. Z." must have the writer's name appended, or it will not be answered, Mr. Ennor having determined not to reply to any anonymous communications.

LEAWOOD MINE.—A notice under this heading, signed "Observer," in last week's Journal, induces me to reply, notwithstanding the writer has not put his name; it is right, however, that the public should know the real facts of the case. The above mine was started in May last, and in eight months the adit level has been cleared and secured more than 200 fathoms. The shaft has been new timbered to the adit, engine-house, &c., erected, and a new 60-inch engine was put to work two months ago. The forcing of water proceeded satisfactorily until near the 19, when the shaft ran together at or below the 19, and the foundation of the sets being gone, they gave way, causing the shaft to run together up to the 15; this run is being secured as fast as possible, and every practical man knows that runs occurring under water cannot be prevented by any agent.—JOHN NICHOLLS: Camborne, Dec. 26.

GREAT WHEAL ALFRED, AND ALFRED CONSOLS.—The working of these mines ceased some considerable time since, and therefore why have not the proceeds of the liquidation been divided among the shareholders? Cannot redress be obtained otherwise than by commencing proceedings in Chancery?—A SHAREHOLDER IN BOTH MINES.

EXPENSIVE MANAGEMENT.—"A Shareholder," alluding to the heavy charges for office expenses in London, directors' fees, and law costs, says—"I think the directors of public companies ought not to sponge upon the estate when there is nothing to divide as a dividend, but as a rule I find that office expenses in London are increasing annually nearly in all public companies, which is anything but creditable to those who incur them, and looks very much like jobbery. I sold out of the Peel River Company for this very reason."

We have a letter for Mr. George Honwood, and should like to hear from him, that it may be forwarded.

CURING SMOKEY CHIMNEYS.—Mr. C. Butler-Clough, whose invention for this purpose was noticed in the Journal a short time since, is requested to send us his address, several correspondents being desirous of communicating with him.

MINING NEWS.—"Observer" (Durham).—We are at all times thankful to correspondents for communicating particulars of local events, in whatever part they may reside; such matters are frequently of much general interest.

MINES MANAGEMENT.—The letter of "Shareholder" (Camborne) can only appear with the writer's name appended. "Shareholder" should attend the next meeting, and ascertain for himself whether a reduction in the expenses can be made—if so, there will be little difficulty in them effecting a reform.

RHEDOL MINE.—In the report in last week's Journal, for 1½ ton of lead per fathom read ¼ ton.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, DECEMBER 31, 1864.

The Report of the METAL MINES COMMISSION proves that our miners die at an early age, and that they suffer from diseases of the respiratory organs in a remarkable degree. We are told by Mr. ROBERT DUNSTAN that "A miner cannot enjoy his health like other people." When asked "For what reason?" he replies, "From the nature of the employment, climbing particularly." We quote this little piece of evidence, as it gives concise expression to a very general opinion that the miner suffers more from climbing than from any other cause. In corroboration of this we find Mr. W. W. TAYLER saying, "I ascribe the diminution of heart and lung disease to the introduction of the man-engine." There is much other evidence tending to the same conclusion. But there is a very much larger amount of evidence which refers the lung disease to imperfect ventilation, rather than to climbing, although the labour of lifting the body, by its own muscular efforts, from the great depths of the Cornish mines, is admitted by all to produce unnatural action of the heart, and consequently, to disorder the circulatory process. Let us turn for a moment to the evidence given in the North of England and in Wales. With respect to the miners of Northumberland, Durham, and Cumberland, we learn that they are very commonly "affected in their breathing." Selecting a paragraph or two from the evidence of Dr. RIALTON GILL and Mr. W. E. EWARD, we shall exhibit the peculiar condition of the lead miners of the North clearly, and these statements, it must be remembered, are confirmed by nearly all the evidence taken. Dr. R. GILL describes the general form of "miners' disease" as "weakness of the frame, debility, attended with more or less dyspnoea, difficulty of breathing, cough with expectoration, in fact, a form of bronchitis." Mr. W. EWARD says, when asked if any particular form of disease presents itself amongst the mining population, "Decidedly; there is one variety of disease, that is, disease of the lungs, commonly called bronchitis: the disease called bronchitis is not peculiar to miners, but there is a variety of bronchitis, both acute and chronic, peculiarly belonging to lead miners." In Wales, Dr. JESSE CONWAY

DAVIES tells us—"We find that the miners are affected with what we call miners' asthma." And then again he informs the Commissioners that "very often it comes on like the symptoms of chronic bronchitis; at other times it comes on with symptoms of affection of the heart—enlargement of the heart."

Without encumbering our remarks with any other quotations from the evidence given by medical men and miners, we may draw the attention of our readers to the fact that the peculiar form of lung disease which follows, it would appear, mining as an occupation, is not confined to the deep mines of the Western Counties. It is equally the affliction which prostrates the lead miner of the shallow mines of the North, who, not unfrequently, walks through the "day level" to his labour, as it is of the copper miner of Cornwall, who has to climb more than 200 fathoms every day upon perpendicular ladders. The medical reports of Dr. PEACOCK, of St. Thomas's Hospital, and of Mr. JAMES BANKART, of Guy's Hospital, are, in every respect, confirmatory of the evidence given, though they have arrived at their conclusions upon an independent examination of the mining population. The result of all the labour, which has certainly been great, of the Commissioners may be summed up briefly to be this. The metalliferous miners, as a body, perish early, and generally from a peculiar form of lung disease. Seeing that this disease prevails with nearly equal intensity in the deep tin and copper mines, and in the shallow lead mines, it is clear that climbing has but little to do in the development of this form of consumption. There cannot be a doubt but that the toil of the ladders, to an already debilitated man, must tend to aggravate his disease. Consequently we have to look to other causes as the source of these irregularities of respiration, which end in confirmed lung disease. All the collected evidence goes to show, that, although great attention has been paid to the circulation of air through the mines, still the ventilation is not sufficiently perfect to ensure pure air to the miner. There is a deficiency of oxygen; there is an excess of carbonic acid; there is gunpowder smoke; and there are gritty particles, which being breathed produce much irritation and distress. The extensive and elaborate analyses by Dr. ANGUS SMITH present us with conditions which we could scarcely have believed, except upon the evidence of one so experienced as he is in the examination of air. Even in our best mines, where the air appears good to the occasional visitor, there is a deficiency of vital air, and carbonic acid is, far too frequently, in excess. We cannot but regret that this really valuable report by Dr. ANGUS SMITH is diluted with extracts from books, which bear but indirectly on the question submitted to Dr. SMITH'S care. Still more do we regret the appearance of a reproduction of the quaint old plates from AGRICOLA. They show us nothing—they teach us nothing—they are well enough known—and can only be regarded as curious evidences of uneducated ingenuity.

The result of all the evidence collected,—of all the reports sent in,—and of all the analyses made, has been to compel the Royal Commission to its first resolution—"That there is a great excess of sickness and mortality amongst metalliferous miners, which is mainly attributable to the imperfect ventilation of mines." We admit the force of many of the suggestions made by the Commissioners, but at the same time we are compelled to dissent from them in the recommendation that the "application of furnace heating" should be introduced in the deep metal mines. Upon this point we reserve our remarks until a future occasion. We purpose in our next to draw attention to some points,—of the greatest importance, as it appears to us, in considering the question of the miners' disease,—which are merely glanced at by the Commissioners, and then regarded only with much indifference. Yet we believe those points are of moment, and that, if they are not fully considered,—and, being considered, dealt with,—it will be in vain that the adventurers in mines incur the cost which must necessarily be involved, in adopting any of the suggestions of the Commission in respect to ventilation.

SLATE QUARRIES AS AN INVESTMENT—No. III.

[FROM A CORRESPONDENT IN CARNARVONSHIRE.]

Proper regard having been paid to the inspection of the rock, and the facilities for working it, as described in our two former articles, it may certainly be asserted that a sound foundation has been laid for a prosperous and very highly remunerative quarry. The hill side, although a great advantage for the reasons assigned, is not imperative, as anyone who has visited Nantlle Vale will know. It abounds in quarries, where slates of all colours are made—green, blue, and red, and of the several qualities of the two latter colours. Many of these quarries are worked at a depth of 100 feet or more below the surface, and not only the slate blocks but the waste also are raised to the surface by steam-power or by water-balance. The latter is so seldom used, that it seems unnecessary to digress in order to describe it fully. The simple principle of it is that a heavier weight from above draws up a lighter weight from below. Even with these drawbacks, we know that the year before last a profit of 10,000*l.* was realised at one of these quarries, and it is natural to suppose that none of them would continue to be worked unless a fair profit were the result. They all have now the advantage of a railway to Carnarvon. Again, water-power may give place to steam-power. Some water would be necessary to generate steam, and the cost of a steam-engine would exceed that of a waterwheel, or turbine. On these minor points everyone may well follow his own devices, subject to this remark only, that practically, where the supply of water is sufficient, the old fashioned overshot water-wheel will be found the most effective motive-power.

THE TERMS OF THE TACK is the next point to which attention should be directed. On a freehold tenure it seems absolutely unnecessary to make a single remark, because every one can do what he will with his own. A TACK NOTE is the most usual mode adopted, and it deserves a most circumstantial description in all its details. It is in form an agreement, and power is given by it, without payment of rent or royalty, to search for and try the veins of slate within the tack during three years, with the option of taking a lease for thirty years, commencing at the end of the three years, upon the terms which are fully set out in the tack note, and the principal points of which generally are pretty much as follows:—That the lessee shall pay a certain annual rent, which varies in different tacks from 50*l.* to 200*l.* per annum. That a royalty of 1-12th of the value shall be paid on all slates made, with a reservation, however, that the fixed annual rent shall be taken as a back reckoning against the royalty. The other matters in it are so much matters of detail that they do not seem to require any remark.

These tack notes are the best and surest protections to any one who may seek an investment for himself, as the three years grace they give affords an ample opportunity for making a thorough trial of the slate vein, without incurring any expense except the money laid out on the rock itself. An original tack note may, therefore, be well recommended to anyone who wishes to embark in a slate quarry. These tack notes, however, have been too often granted to men who have not the slightest intention of working the quarry themselves, but by making slight workings in different parts of the tack, seek to sell their tack notes for as much money as they can get for them. This class of men are usually prepared with reports as to the value of the slate rock in their tack. No doubt many really good quarries have been purchased from the holders of tack notes, but it will be well to know the position and character of the parties by whom reports may be made, and also to have the advice of an honest practical quarryman.

The reservation of any annual dead rent (as it is called) ought to be determined withstood. It must always be for a few years a tax on the tenant for the landlord's benefit even when the quarry is succeeding well; and if the worst should come to the worst, it would be no slight aggravation of the evil to be fixed with a dead rent of from 50*l.* to 200*l.* a year during the remainder of the lease—NEVER, therefore, consent to pay a dead rent.

Let us now make a few remarks on the length of term usually granted by a lease—THIRTY YEARS is far too short. Your undertaking will have been gradually expanding from year to year, and your profits proportionably increasing until you have made a very considerable fortune; but why are you, by whose capital and energy these results have been brought about, to relinquish to your landlord (who has already been enriched by your royalty) an undertaking by that time yielding a yearly fortune? Get an eighty years' lease if you can, but do not be content with less than fifty. If your efforts are earnest you will succeed in this, because the prospect of royalty is a great incentive, as it often increases the rent of land from 6*d.* to 100*l.* an acre.

Next as to royalty. One-twelfth is far too much, and this for the reason already assigned, that it is your capital which produces it, while the landlord pockets the cash: one-twentieth, or 5 per cent. of the whole produce, ought to be enough.

The royalty is almost always universally reserved on slates "made marketable"—that is, just as they are delivered at the quarry bank from the slate makers' hands. This mode of reservation is subject to two objec-

tions, but neither of them of a very weighty character. The first is that it makes a tenant liable for any breakage which may occur in carriage; the second, that the royalty must be paid before the slates are sold. Although the breakage is usually provided for, as I have before remarked, by a few additional slates being made over count in every 1000 by every slate making bargain, and the demand for slates is at least three times in excess of the supply, yet it would be better to get rid of this reservation by bargaining that royalty should be paid on slates sold.

The subject has hitherto been treated of from its very inception, and has pointed out the way in which a sound foundation may be laid for a valuable undertaking. The capitalist, who may wish to invest, it is hoped may find in the remarks that have been made a safeguard against deceptions which have been sometimes practised. The means of guarding against them have been, perhaps, too briefly pointed out; but, at all events, everything has been carefully noted which has been ascertained to be a snare to the uninitiated. The state of the slate market makes rivalry among slate proprietors a thing unknown. From any or all of them it is easy to obtain any information that may be asked for—indeed, they have pleasure in giving it, as they take great pride in their works.

Let us conclude our present article with a short extract from a celebrated cyclopaedist:—"As this substance forms the most light, elegant, and durable covering for houses, and is, of course, of considerable value; it is rather surprising that so much indifference prevails regarding the search for it in those districts where common slate, or clay-slate, abounds. This neglect is the more remarkable when we consider the great expense frequently incurred in searching for coal, a substance of much less value in proportion to the weight." The contrast between Slate and Coal here drawn will be fully enlarged on before these articles are concluded.

THE ASSOCIATION FOR THE PREVENTION OF STEAM BOILER EXPLOSIONS, MANCHESTER.

A numerously attended special general meeting of subscribers was held at the Town Hall, Manchester, on Tuesday, Mr. William Fairbairn, C.E., LL.D., F.R.S., President, in the chair. Present—Messrs. Thos. Baxley, M.P., Hugh Mason, Ashton-under-Lyne; James McConnell, Manchester; H. R. Grey, Stockport; John Holdsworth, Eccles; James Petrie, Rochdale; Samuel Rigby, Warrington; W. Roberts, Burnley; Wright Turner, Mayor of Salford, &c.

At this meeting it was proposed, and unanimously approved, that the Association should adopt the principle of Pecuniary Guarantee; the guarantee, however, not by any means to supersede inspection, but to be grafted upon it, and no boiler to be guaranteed that is not actually known to be safe. The amount of the guarantee to be 300*l.* for each approved boiler under the charge of the association, so that in the event of explosion the damage done either to the boiler itself, or to the surrounding property, other than by fire, to be made good in each case to the extent of the guarantee—300*l.* The experience in working the association during the last 10 years shows that the new rates now adopted will amply meet the expense of inspection, as well as any demands that may be made in case of explosion, and will soon establish a considerable reserve fund. To assist the reserve fund, however, during its infancy, and give all the members of the association full confidence that their claims will be met in the event of explosion, upwards of ten gentlemen have voluntarily come forward as guarantors, and endorsed the reserve fund to the extent of 1000*l.* each for the next four years—Jan. 1, 1865, to Dec. 31, 1868. Thus, with not less than ten guarantors, the Guarantee Fund amounts to, and already exceeds, 10,000*l.*, which is more than sufficient to meet any demands that will be made upon it. The adoption of the Pecuniary Guarantee, however, is not to make any change in the general constitution of the association adopted at its foundation ten years since, but the position of the members of the committee to remain honorary, as heretofore, and neither the guarantee nor the working of the association generally to be productive of dividends, but simply to promote inspection and the mutual benefit of all its members as steam users. An abstract of the speeches delivered at the meeting by the President, Vice-President, and other members of the executive committee will possibly be given in our next Journal.

PRUSSIA—ITS RAILWAY SYSTEM, AND INDUSTRIAL PROGRESS (COAL AND IRON).

In the Berlin *Börsen Zeitung* of Dec. 13 we find the following statement with reference to the rapid increase and extension of railways in Prussia, which cannot fail to be of interest to many English readers:—

The prospective development of the Prussian railway system is now (leaving England out of the question) one of the grandest which has been observed up to the present time. Whilst in Great Britain and Ireland, as we lately stated, there is 1 mile in length of railway for every 2 3-10ths square miles, in France 1 mile for every 6 1-10th square miles, and in the whole of Germany 1 mile for every 6 2-10ths square miles, Prussia had at the end of the year 1863 1 mile of railway for every 6 4-10ths square miles. That proportion was then attained, owing to the fact that in the three years, 1861, 1862, and 1863, in the whole 86 4-10ths (German) miles had been added, whereby the total length of the Prussian railways was raised to 792 9-10ths (German) miles. Since then, however, 108 9-10ths miles have been put in execution and partially finished, 184 7-10ths miles are now either in a state of preparation for work, or secured as to their execution, and 411 5-10ths miles are projected, with a tolerably certain prospect of realisation, so that an increase of the Prussian railway lines is to be expected within the next few years to the extent of 645 1-10th miles, whereby the total length of the Prussian railways will appear as 1438 (German) miles, equal to 6880 English miles, or more than double the length at the close of the year 1860. A relation is thus evidently established, which considerably surpasses the relation of railway length to extent of territory in the rest of Germany, and places Prussia, as regards the railway system of the larger European States, immediately next in rank to England. Up to the end of 1863 the construction of Prussian railways had absorbed 436 1/2 millions of thalers. The next group in order of completion is estimated to cost 56 millions of thalers, the second group 62 1/2 millions, and the third group 172 1/2 millions, so that it is to be calculated that a capital of about 727 1/2 millions thalers (109,125,000*l.*) will then be productively invested in Prussian railways.

An interesting fact in connection with the foregoing statement is, that the capital employed in the Prussian railways is really, as the *Börsen Zeitung* expresses it, "productively invested." Scarcely an instance can be named of any Prussian railway which does not pay a fair return upon the whole capital invested in it. A large portion of the capital of each company is raised in "obligations" or "priority shares," bearing interest at rates varying from 4 to 5 per cent., the former (obligations) being amortisable in a limited number of years, while the original shares of the principal railways are receiving dividends at the rate of 6 to 12, 14, 17, and even 22 per cent., and are negotiable at such figures as 124, 136, 162, 205, 220, and 313 per cent. [See *Kölnische Zeitung*, of Dec. 15.]

It is also worthy of especial notice how intimately this extraordinary extension and prosperity of the Prussian railway system is connected with the development of the industrial resources of the country, more particularly with the growth of the coal and iron industry of the Westphalian and Rhenish provinces. The governmental statistical records show that the production of coal in the Westphalian district alone has steadily increased from 3,800,000 tons in 1858-9 up to 6,300,000 tons in 1863, and this rapid rate of increase still continues; while the selling price of the coal at the pit's mouth, which in the first-mentioned year was 10*s.* to 11*s.* per ton, has been gradually reduced to 5*s.* 6*d.* or 6*s.* per ton in the last year. This great reduction of the selling price has been only rendered possible by the introduction of the most improved and economical system of working the collieries, and especially by the working of large quantities. The sale of those large quantities only became practicable upon the introduction of very low rates of freight on the railways which had to convey the coal to distant markets, and, on the other hand, the great increase of the coal traffic thus brought about has reacted upon the railways, greatly improving their profits and dividends, and rendering absolutely necessary those extensions and new lines, already undertaken, or now contemplated.

In conjunction with the increased production and reduced price of coal, and the adoption of low railway freights for raw materials, the iron trade in Westphalia has, within the last few years, made equally striking progress in the way of increased production and reduced cost of production, so that the ironmasters already look with comparative indifference to the approaching abolition of the protective duties on the import of foreign iron, which only a few years ago was looked upon as certain ruin to their branch of industry. A continuation of such combined working in the extension and development of the railway system, and of the coal and iron industry, must in future years produce most important results in Prussia, and more particularly in Westphalia, where there is a richness of mineral wealth, and advantages of position unsurpassed by any industrial district in Europe.

GOLD QUARTZ CRUSHING IN SIBERIA.—The gold mines of Siberia employ 40,000 workmen, producing about 1500 pounds of gold, valued at about 3,000,000*l.* The process in use for working was until recently very costly, and the Government mines did not by any means produce the profits which might be expected. It was the same with the private workings. In some parts of Siberia many mines have been given up because the yield would not cover the expenses.

This state of things has for some time past occupied the attention of the Government but until recently no remedy could be found. Late, however, a Russian subject, who has been for several years in California, has introduced new and improved machinery, which has so simplified and improved the process of working, both in placers and quartz mines, that the 40,000 workmen are now producing about double the amount of gold formerly realised.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 29.—The Preliminary Meeting of the Ironmasters' Association of the South Staffordshire District was held this afternoon, at the Swan Hotel, Wolverhampton. The attendance was influential, though not very numerous. Mr. W. O. Foster, M.P. (firm of John Bradley and Sons), presided, which excited some surprise, considering the dissatisfaction expressed at his having, prior to the quarterly meeting in Birmingham in July last, announced a reduction of 1*l.* per ton in the price of iron, in opposition to the decision come to at the preliminary meeting of the association a fortnight previous, though the decision was, it must be confessed, only supported by a small majority. The first point to be considered was that of prices, and it was resolved that "prices remain the same." The next point was the appointment of Chairman, in the place of the late Mr. Philip Williams, and the following resolution was unanimously adopted:—"That in the interests of the trade a panel of gentlemen be appointed to act as a committee of the trade, and that they, in the rotation of their names, be appointed to act as Chairmen of the Iron Trade of South Staffordshire for one year. That the present honorary secretary (Mr. Walter Williams, jun.) continue to act in the same position under the panel, with the aid of an assistant secretary." The list of names are—Mr. W. O. Foster, M.P.; Mr. W. Mathews; Mr. John Hartley (G. B. Thorneycroft and Co.); Mr. W. Barrows; Mr. George Barker (Chilling-ton Company); Mr. Walter Williams, jun.; Mr. Frederick Smith (agent to the Earl of Dudley); and Mr. W. M. Sparrow.—Mr. Foster, of course, presiding for the first year. The absence of the name of Mr. James Bag-nall from this list is owing to his having declined to encounter any additional labour or responsibility, on account of his state of health and the extent of his engagements. Mr. Mathews also, it is understood, desires not to take the chair on similar grounds, but, it is hoped, may be induced to do so at the termination of the present year. The decision come to is evidently one of compromise. The annual and forced change of Chairman does not appear a very wise one "in the interests of the trade." The committee, however, may act as a cabinet, and thus ensure a tolerably steady and uniform course of policy. With reference to what has been alleged as to the close character of the association, several new members have lately been added, and it is arranged that any member may propose any gentleman for admission.

The fortnight's notices for the reduction of puddlers and millmen's wages will be given on Saturday night next. It is impossible as yet to say what course the men will take, but the masters are prepared for resistance, though the general opinion appears to be that the men will yield. That the trade is now very dull, both in North and South Staffordshire, and in the other seats of the manufacture in the kingdom, there can be no doubt whatever.

This being the last week of the year, a glance at the course of the trade in Staffordshire during that period may not be without interest. The Iron Trade was in a state of considerable, though it was soon proved only temporary, activity. At the commencement of the year, bars had been raised from 7*l.* to 8*l.* 10*s.* at the end of 1863, and in January a further advance of 1*l.* took place. At the same time puddlers' wages had been raised by three successive advances from 7*s.* 6*d.* to 10*s.* 6*d.* per ton, and other wages fully 30 per cent. The course taken in South Staffordshire was followed in the North of the county; and hot-blast pig-iron, of South Staffordshire make, was quoted at the quarterly meetings in January at 4*l.* 10*s.* to 4*l.* 15*s.* per ton. This prosperity was, however, rapidly checked, though the orders on hand were sufficient to keep the works well employed for some time. The export of iron to France had been increasing greatly under the operation of the new commercial treaty; but the rise in the price of iron soon checked it, and it has gradually declined to a very low figure. In the month of January Belgian iron was being brought to this country, an indication that the high prices would not be permanent. The price of pig-iron rapidly fell, owing to the extensive importation into South Staffordshire, especially of the hematite pigs of Lancashire and Cumberland. To check this reduction in price, which was most serious with wages so high, blast-furnaces were blown out, and by August there were forty fewer in operation in the South Staffordshire district than in January. This, however, did not result in any advance in the price of pig-iron, owing to the very great supplies from a distance.

The question of reducing the wages of colliers and blast-furnace men was mooted as early as May. A number of the miners about Bradley, near Bilston, had, in the pressure of trade, secured an undue advance of 3*d.* per day, and this was taken off in that month, and a partial strike was the result. Early in June a general reduction of 3*d.* per day in the wages of thin coal miners was resolved upon, owing to the low price of pig-iron, and the reduction made in coal; and this, after a slight resistance, was submitted to. A somewhat corresponding reduction in North Staffordshire was partially resisted, but no general and extended strike took place. On June 16 a reduction was made in the price of thick coal in the Dudley, West Bromwich, and Oldbury districts, and of 6*d.* per day in the wages of the miners, and 10 per cent. in those of the blast-furnace men. This was resisted, with more or less strenuousness, for 17 weeks. The strike was nearly dying out at the end of August, when the formidable morning gatherings, with bands of music, were organised to go round to the pits, and thus its area was greatly extended. In October, however, the police took steps to put a stop to these demonstrations, a collision occurred, and 19 men were arrested, and have since, as stated previously, been convicted of conspiracy and intimidation, but very leniently dealt with. After their apprehension the strike quickly collapsed.

At the Preliminary Meeting of the Ironmasters Association in June it was resolved by a small majority not to reduce prices. It was generally felt that the state of the trade demanded a reduction, but that the time had not yet come for making a corresponding reduction in the wages of the puddlers and millmen. As stated above, however, Mr. W. O. Foster, M.P., acting on his own views, announced a reduction of 1*l.* per ton, which was necessarily followed by the trade generally, and no step was taken to effect a corresponding reduction in the wages of the men employed at the finished ironworks, though the necessity of this step was universally urged, until it was resolved upon last week.

It has been noticed how great has been the falling off this year in the exports of iron to France. In the two previous years the extensive export of iron to that country to some extent compensated for the falling off to the United States after the breaking out of the war. In the early part of the present year an opposite state of things was experienced. The United States took iron to a very large amount, and this was only checked to a slight extent by the imposition, for 60 days, of an addition of 50 per cent. to the high import duties previously in existence there. Considerable shipments of iron took place to America until about August, when a decided reduction took place, and the export has, for the last three months, been of very small amount.

The colliers' strike has been already referred to. Unions of this class of men and of ironworkers have been established, taking the whole kingdom for their area. The results of these gigantic organisations were predicted. Already the miners have split into two camps, but the great point is that the masters are now all acting together, and that the reduction of wages decided on at Birmingham last week applies to the whole kingdom.

The Hardware Trades of Birmingham and South Staffordshire have, during the year, been very healthy and active. The East India market has been dull, but, on the whole, a great trade has been done; and the only serious failure is that of Messrs. Barker and Sons, metal brokers, of Birmingham, which was the result of most reckless speculation.

Mr. Philip Williams, the respected Chairman of the Ironmasters' Association, died on Oct. 12. On Dec. 17, Mr. Samuel Wills, of Darlington, who, from small beginnings, had amassed a large fortune in the iron trade, died after a brief illness. He had previously transferred his works to a limited company.

A most important report has just been issued by the Children's Employment Commission, which recommends the extension of the Factories Acts to the Iron Trade and the Hardware Trades of Birmingham and South Staffordshire. The great obstacle to the application of these Acts to the hardware trade is that the greatest evils exist in the case of small manufacturers, who work at their own homes, and employ their own children, and numbers of boys and girls, often at a very early age. In many of these cases, no doubt, the hours worked are excessive and irregular, and the shops filthy and unwholesome, but the vast number of such little masters will make inspection difficult. The proposal made to meet the case is that all places where less than twenty persons are employed shall be under the control of the local government bodies of the towns in which they are situated, leaving the larger works, only to the Government Inspectors. This is a proposal which will require careful consideration. It is very likely, looking at past experience, that the recommendations of the Commission will be carried into effect, although a good deal of resistance is probable.

At the Willenhall Petty Sessions on Monday last, Mr. George Williams, mine agent, of Bentley, was summoned by Mr. Baker, the District Inspector of Mines, for neglecting to report an explosion at Bentley Colliery on Nov. 24 last, according to the terms of the Act, which requires that information of such occurrences shall be given immediately to the Home Secretary and the local Inspector. The defence was that the defendant was not informed of the occurrence by the butty for several days, although he visited the colliery every day. The bench inflicted the mitigated penalty of 10*l*.—William Lane was next charged with having neglected to fence that part of the pit at which the explosion occurred, and after a lengthy examination, in which he failed to establish his innocence, was fined the full penalty of 40*l*. and costs.—Mr. Edward Forster, agent to Messrs. H. B. Whitcomb and Co., of New Cross Colliery, was likewise summoned for neglecting to give notice of an accident at that colliery, whereby on Nov. 18 one of the workmen sustained injuries, which subsequently resulted in death. The defence in this case was that the accident was not for some time considered at all serious, and a medical certificate to that effect was handed in. A fine of 5*l*. and costs was inflicted.

REPORT FROM NORTHUMBERLAND AND DURHAM.

DEC. 29.—The Coal and Iron Trades continue good, the demand for both being sufficient to keep most of the works in full employment. The make of iron in the district, both of pig and bar-iron, &c., continues to increase; but, although there are sufficient orders on hand to keep the works generally going, prices have lately drooped a little. There is a demand for ore ground, and any promising tract is eagerly taken up. The extensive firm of Bell Brothers have lately leased a tract of ore ground in East Cumberland, 2000 acres in extent. The late sale of the Byer's Green Colliery for 53,000*l*. sufficiently proves that those works are now attracting more attention, and securing better prices than have been realised during the last ten years. In both the coal and iron trades more attention is being directed to the application of machinery, either as auxiliary to, or to supersede hand labour. For the purpose of puddling iron attempts will shortly be made to introduce machinery here, in order to facilitate the process—the most laborious portion of the work to be performed by machinery, and the process to be finished by hand labour. This has already been effected partially in Staffordshire, and a similar process will be introduced here. By this method a larger quantity of iron can be worked, and a better description of iron produced at the same time, than by hand labour alone; consequently, the advantages will be great, as the expenses of puddling iron will be materially reduced, and a better quality of iron made, while the men will be relieved from the most severe part of the labour attending the process.

With respect to the Coal-Cutting Machines, they have not made much further progress here of late. At most of the collieries where they have been got to work, the workings are situated at a considerable distance from the shaft, thus necessitating a considerable length of pipe, and complaints are made of the great loss of power caused by forcing the air through these long pipes. This scarcely gives the machine a fair chance of success, as the length of the pipes being from 1200 to 2000 yards, a powerful engine is required (not less than from 30 to 40-horse power) to keep one coal-cutting machine in motion; and as so few are provided with this power, in the first instance (that is, set apart for the exclusive use of the machine), this has seriously affected the success of most of the machines. It is considered also that in order to convey compressed air as a motive-power such distances as we have mentioned, with any approach to economy, much larger pipes will be necessary than those at present in use. However, it is evident that much time and ingenuity will yet be required in order to bring this very promising machine at present in use to real benefit. It is, however, matter for surprise that they have not yet been tried in the new collieries lately commenced in this district, where the workings are but little advanced from the shaft. Under these circumstances, a small engine would suffice to drive one or more of the coal-cutting machines. To begin, therefore, at those works where the coal is situated at a great distance from the shaft appears to be the wrong end; at any rate, all the difficulties that ever can be encountered are met with at once. A coal-cutting machine lately tried near Leeds is attracting much attention here, and is highly praised by many who have inspected it. This machine is constructed on the principle of a slotting machine, the coal being cut by means of a sort of gauge attached to a bar, acting direct from the piston. The whole engine appears to be extremely simple, and it is worked by hydraulic power. Its performance is highly spoken of by those who have seen it, and we expect to have some further account to give of it shortly.

At the West Hartlepool Rolling Mills (Messrs. Pile, Spence, and Co.'s) the new forge mill, steam-hammer, and puddling furnaces were formally started on Saturday, Miss Bowles, the daughter of the superintendent, performing the ceremony of starting the steam-hammer, which is a 5-ton hammer, and Mrs. Wood occupying a similar position at the rolling-mills. Both the engine and the hammer worked admirably. The engine for this portion of the works has been made by Messrs. Rothwell and Co., Union Foundry, Bolton, and the steam-hammer at Mr. Barningham's works, Manchester. The forge-mill, puddling-furnaces, and other appliances have been cast and fitted up at Messrs. Pile, Spence, and Co.'s own foundry at West Hartlepool. The mill was started at those works some months ago, as we noticed at the time; but the completion of the puddling-furnaces, &c., will enable the firm to produce other qualities of iron than scrap bars. A large plate-mill is also in progress, and will be ready for work in a short time. The iron forged on Saturday was puddled-iron, which gave additional interest to the proceedings.

REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

DEC. 29.—There is a dulness, inseparable from the season, pervading the Iron Trade, and no improvement is anticipated until after the Quarterly Meetings of the trade. The enquiry for pig-iron is quiet. The proposed reduction in the wages of puddlers and millmen is exciting great interest amongst ironmasters. It is contended now that the price paid for labour and raw material does not at the present quotations for iron leave a fair working profit. There is a considerable amount of grumbling by the men at the proposed reduction, and many assert that they will not accept it, and will strike rather than do so. The usual fortnightly notices are to be given on Saturday, when, no doubt, the question will assume a more decided form one way or another. The masters have agreed by a unanimous resolution that in the event of a strike, no matter in what part of the country it may occur, they will support each other, even to the stoppage of the works. It is hoped the reduction will be accepted amicably. Cleveland iron is again lower, and the demand depressed. The Steel Trade is dull, and the latest advices from America are somewhat unfavourable, owing to the fact that American merchants are underselling to a very considerable extent. A good trade is being done in Rotherham for stove-grates and castings generally. The creditors of Messrs. Burgin and Wells, of Sheffield, whose liabilities are estimated at 18,000*l*. odd, have met. The assets are estimated at nearly 12,000*l*. which, if recovered, will leave a deficiency of 6000*l*. A petition in Bankruptcy has been filed, but it is hoped their affairs will be wound-up under an assignment. The Holmes Coal Company are large creditors, and they have a private asset from Mr. Burgin, and the creditors have offered, in case this money is handed over to the estate for division *pro rata*, to accept an assignment. The briskness in the Coal Trade continues unabated, and good orders are received from all parts of the country. The rates are firm, and the trade was hardly ever in a more satisfactory condition.

We have frequently noticed the rapid development of the minerals of Derbyshire in the numerous new collieries which are being opened. On Friday last a dinner was given at Shirland to celebrate the opening of the new tunnel, which has been made for the purpose of affording railway communication between the Shirland Colliery (now sinking) and the main line of the Midland. The colliery is the property of Mr. G. E. Bevan, of Northampton, and the mineral field embraces about 700 acres. Most of the minerals have been purchased of the executors of the late Mr. T. M. Siddall, of Halford Gate, Alfreton. Mr. R. Pocklington, of Sheep-bridge, near Chesterfield, the extensive contractor, is making the tunnel and the railway, only a short length, and he very liberally provided an excellent dinner for the navvies and a number of friends, and, singular enough, it took place within the tunnel, which was lighted up for the occasion. Mr. T. Harrison, of Barnsley, the agent for Mr. Bevan, took the chair, and Mr. W. Goodwin, mineral agent, occupied the vice-chair. The healths of Mr. Pocklington, the founder of the feast, Mr. Bevan, Mr. Harrison, Mr. Clays, the manager for Mr. Pocklington, were all musically honoured. After the men had had a good fill of beef, ham, &c., they were supplied with beer. After the men had been fed, Mr. Pocklington and his friends partook of a champagne dinner in the offices, which brought the proceedings of the day to a conclusion.

On Monday, an accident, resulting in the death of one man and injury to several others, occurred at Messrs. Hall and Boardman's colliery, Swadlincote. Early on Monday morning a smouldering fire was discovered in an old working, and choke-damp was freely given off. Mr. W. Eley, the manager, and several men, went down to build a wall to dam up the place, but before they could complete it the noxious gas overpowered them, and they fell completely exhausted. Other workmen hearing of their perilous position, went to their assistance, headed by the deputy bailiff, Mr. Eary, and although at suffering very much themselves, they carried the men to the pit mouth. One man, William Walley, was quite dead, and it was thought for some time that Mr. Eley, and a youth named Giltiver, could not recover. Animation was, however, at length restored, and all are now recovering.

The National Miners' Conference has been sitting at Chesterfield daily during the present week to discuss various topics for the benefit of the working miners. They were unable to do any business on Monday owing to the absence of some of the delegates, who had to travel a long distance, but the proceedings have since been energetically conducted. Mr. Thomas Kimberley (South Staffordshire), the President of the association, occupied the chair, the vice-chair being filled by Robert Cheesmond (Durham). Amongst the delegates present were: John Scott Sangster, treasurer, Durham; John Griffith, Rhondda Valley, South Wales; John Farrall, Hanley and Longton, North Staffordshire; Levi Britain, Brierley Hill; Lewis Eccleshall, Shropshire; John Catchpole, Derbyshire; William Dainty, Dudley; Thomas Topping, St. Helens; D. H. Thomas, Nant-y-Glo, South Wales; Thomas Griffiths, Oldbury and West Bromwich; John Shaw, trustee, Leeds. John Catchpole and William Dainty were appointed the credential committee, and the regular business commenced by the several delegates describing the present condition of their respective districts. A levy of 10*l*., to defray the expense of the conference, was agreed to. The minutes of the council meeting, in London, were confirmed, and Lewis Eccleshall and Thomas Griffiths appointed auditors. Thomas Topping stated that the district he represented was labouring under considerable difficulties by their coals being taken at the pit bank, and the "popping" system was carried on to a fearful extent. The masters

about St. Helens were also adopting a fresh rule, to the following effect:—That if a drawer had done his work by 2 or 3 o'clock they would not allow him to ascend the pit until 4, which was likely to bring about some unpleasantness. Robert Cheesmond urged that all had a right to ascend direct. The thing had been tried at Durham, when the magistrates came to the conclusion that the pit-shaft was the high road for the miner, and it had no right at any time to be closed. Some further discussion ensued, after which Levi Britain proposed that a deputation of the men of St. Helens wait upon their employers, which proposition was seconded and carried unanimously. On Tuesday afternoon a public meeting was held, when Levi Britain observed that the miners of the country should amalgamate without delay, for the purpose of improving their position, and raising colliers to their proper position in society. John Shaw urged the necessity of keeping the production and consumption on the same level footing. On the re-assembling of the delegates, the auditors stated that they found the accounts showed—Income, 55*l*. 2*s*. 2*d*.; expenditure, 36*l*. 1*s*. 11*d*.; balance, 48*l*. 5*s*. 3*d*.; present liabilities, 26*l*. 17*s*. 6*d*. The accounts were unanimously adopted. With regard to the Mine Inspection Act, Robert Cheesmond said he considered they had not a sufficient number of Inspectors. They wanted Inspectors not to tell the masters when they were coming to inspect the mines, but they wanted Inspectors to inspect mines when they thought fit. On Wednesday the memorial to Sir George Grey, prepared by Mr. Roberts, was unanimously adopted. It stated that the conference represented 100,000 miners, and concluded—“Now, Sir George, I am instructed to ask your attention to the very important matter I bring before you. By the 8th sec. of the 23d and 24th Vic. cap. 151, p. 2, I read that it is lawful for you to appoint any fit person or persons to be an Inspector of coal mines and ironstone mines. I gather, therefore, it rests with you to provide a sufficient quantity of the right material—the right men for the too-long neglected duty—and with very profound confidence I venture to take the liberty of suggesting that an appointment of twenty-four practical pitmen, at 180*l*. a year, with an allowance for travelling, as sub-inspectors, would do much in averting those frightful catastrophes which deprive wives of husbands, children of fathers, and the country of its backbone and manly vigour.” It is provided by the rules of the association that if any dispute should arise between employer and employed in any district, and the council are of opinion that the members are justified in their proceedings, they shall lay a levy upon each district to raise funds to pay each member 10*s*. per week so long as the dispute shall continue.” Mr. Roberts, in answer to a delegate, said he looked upon the Truck Act as quite sufficient, and if men did their duty in all cases, he could prosecute with success in all cases. Certainly, masters did sometimes evade the Truck Act; but if they (the colliers) went to the Court of Queen's Bench they invariably succeeded. He thought it advisable not to seek for any alteration in the Act. Respecting Lord Campbell's Act, Mr. Roberts thought some improvements might be introduced, and he considered that the present time was the most advisable to introduce them. He also considered that the Masters and Servants Act most unsatisfactory.—The Conference continues its deliberations to-morrow.

An interesting Truck case was heard at the Sheffield County Court yesterday, before Mr. T. Ellison, the judge. Messrs. Hattersley sought to recover 6*l*. 15*s*. 2*d*. from a man named G. Ryalls, of Bond-street, for goods sold. It appeared at the trial that the defendant had been in the employment of the plaintiffs as a foreman, and that he had purchased from them a gold watch, an iron bedstead, a quantity of perfumes, and other articles, which were to be paid for, as the plaintiffs alleged, by weekly instalments, but which were, in reality, as the defendant asserted, paid for by stoppages from his wages each week. He alleged that he and other workmen were compelled to purchase goods from the plaintiffs as a means of retaining their situations. The defence was that the case was within the Truck Act, and that, therefore, the amount could not be recovered. For Messrs. Hattersley, it was contended that the defendant, being a foreman, was not a “workman or artificer” within the meaning of the Act. The judge, of course, overruled the objection, and judgment was given for the defendant, but without costs.

The readers of my letter will be interested in learning that a fourth enormous cannon in iron was lately cast at Petrozavodsk, in Russia, on the American system, that is to say, by cooling the inside with water. In a rough state these guns weigh 2500 cwt. each, and when finished, they weigh 1800 cwt. The diameter is 15 in., and they are more than 12 ft. long. They throw balls weighing 595 lbs. The gun when tried bore a very heavy charge of powder, and produced a most destructive effect on a plate of iron of considerable thickness, particularly when shells cast in hard metal were used. These cannon cost one-sixth less than those in steel, and yet the system has never been adopted except in America and at Petrozavodsk.

REPORT FROM MONMOUTH AND SOUTH WALES.

DEC. 29.—The Iron Trade of Monmouthshire and South Wales remains in a moderately satisfactory state, and the works are, upon the whole, pretty regularly employed. As is always the case in the winter, work is not quite so brisk as in the summer, more especially out-door work, and hence the slight dulness that is evinced is partly attributable to the season of the year. There are very few orders in hand, even with the most favoured makers, and some, it is known, have not an order on the books, and, consequently, it is not surprising that complaints are general as to the state of the trade. In a few weeks, again, a better state of things is expected to prevail, for buyers are now, without a doubt, holding back specifications until the result of the quarterly meeting is known. It is believed in this district that although the trade is unquestionably rather depressed, as compared with two or three months ago, yet there will be no alteration in the declared list of prices, as such a step, without a second reduction in the wages of the men, would leave the ironmasters in just the same predicament as they are at present. The Steam Coal Trade retains its vitality, and there is a full average business doing. Merchants have a good many orders in hand, and the prospects for the new year are certainly encouraging. It must be remembered, however, that the prices which ruled last summer for a short time are not to be obtained now, and very probably it will be quite as much as the coalmasters can do to keep up present quotations. Many of the shippers complain that through the irregularity of the men in working they suffer great inconvenience, and demurrage has often to be paid, a fact which is not at all creditable to the colliers. The demand for house coal remains about the same as last week, and prices are maintained. Tin-plates are dull of sale, and several of the makers are still without orders.

The old Rumney line, which has been purchased by the Brecon and Merthyr Company, is about to be opened for passenger traffic, and the railway communication will shortly be complete from Brecon to Merthyr and Newport. It will be remembered that last session the Brecon and Merthyr Company obtained running powers over the Aberdare extension of the Great Western, and when the Bargoed branch is completed, they will then be able to convey Aberdare coal to Newport at the same rates as the Taff Vale Company charge to Cardiff. This is a matter of considerable importance to colliery proprietors of the Aberdare, for they will then not be dependent upon one port, as is the case at present.

Enquiries having been made through the *Mining Journal* as to what the directors of the Aberaman Ironworks Company (limited) are doing, it may be as well to state that the works are going on as usual under the old proprietor (Mr. Crawshaw Bailey, M.P.), and it is reported that the new company are to take possession on January 20.

Iron shipbuilding is gradually becoming an important branch of trade at Llanelly. A third iron vessel has just been completed at the yard of Messrs. W. H. Neville and Co., and it is expected that a fourth will be commenced without delay. This shows that commercial enterprise has not become dormant at Llanelly.

The arrivals at Swansea include—the Augusta Schneider, from Cuba, with 550 tons of copper ore, for Richardson and Co.; the Havre, from Havre, with 579 bags of barilla, for H. Bath and Son; the St. Bernard, from Carriai, with 545 tons of copper regulus, and 95 tons of copper ore, for H. Bath and Sons.

LLANFAIR GREEN AND BLUE SLATE QUARRY.—The workings in this quarry have rapidly progressed during the last four months—the chamber on the south side of No. 1 tunnel has been opened up to the level above, a distance on the back of the vein of about 34 yards, and is now being widened to about 20 yards in breadth. Slate bargains will very shortly be commenced in this chamber, where the rock presents a fine appearance. On the north side of No. 1 tunnel a similar chamber has been opened up to the level above, 34 yards high, and is now being widened in the same manner. The rock laid open is massive, and of excellent quality, and will, undoubtedly, yield a good supply of slates. In No. 3 chamber the rock is now being opened, preparatory to commencing slate making, on the same rock from which all the slates on the quarry have been made at the open cut above. From this chamber a tunnel has been driven southwards on the back of the vein, upwards of 50 yards. This tunnel is passing through some of the largest and finest rock yet seen in the quarry; it will be driven on till it intersects No. 1 tunnel, after which chambers will be opened up in the intermediate ground, and this portion of the vein, about 100 yards in length, will be regularly developed. It is intended as soon as practicable to commence driving from No. 1 tunnel southward, till the Caerphig Quarry is reached, a distance of 100 yards further, when that intermediate ground will be gradually laid open in the same manner as the northern portion. No. 4 tunnel, which is 15 yards vertical below all the other tunnels, and nearly 100 yards in length, has at length reached the blue slate vein. As soon as the vein shall have been passed through chambers will be opened, as in the levels above; and there is no doubt that at this increased depth, as is usually the case, the slate will have improved in proportion to the depth from the surface. The tunnel to intersect the large Green Vein has been steadily prosecuted, and it is calculated, as nearly 150 yards have been driven, that the vein may be expected to be entered in a few days. The same description of chambers and openings as are necessary in the case of the Blue Vein will gradually develop this vein also; and, when completed, this quarry must, undoubtedly, become one of great value and importance.

THE PRINCE OF WALES SLATE QUARRY (Carnarvonshire).—Since the publication of the last report the seven galleries in work have constantly improved; they have been extended considerably in length, and also in depth, as the rock is gradually worked back towards the mountain. Five of the galleries have produced slates of very large size, of which many hundred tons are now on the banks ready for the sawing and planing machinery. Some of these galleries will in a short time regularly produce slates also—indeed, from one of them excellent slates have already been made, in addition to those from No. 3 gallery, which are daily increasing, as the opening is extended under gallery No. 2. Two of the patent machines, several of which are at work in Col. Farrant's quarry, are now at work dressing the slates from gallery No. 3. A sink is now being made in this gallery, and a level being driven into it from the opening in No. 4, to facilitate the production of slate in this part of the quarry, by which means, it is expected, a saving of several months will be effected. The quality of the slates cannot be excelled in any quarry in Wales. They are now carted to Carnarvon at 10*s*. per ton, and will be shipped from time to time as

fast as they can be got down. The breakage is unusually small—on the average not more than one or two slates in a cartload—this, no doubt, arises from their remarkable toughness; the breakage in some quarries amounts to a very serious item. The machine-house, of about 100 feet in length by 40 ft. in width, has been erected, and is now being roofed; the water-wheel is erected, and finished, and the sawing and planing machinery ready to go in as soon as the roof is on the house. When this work is completed the large quantity of slates now on the banks can be made marketable; and these, together with the slates, will produce large and increasing returns. Barracks to accommodate 100 men are in course of erection, and a sufficient number for about 50 men have already been completed, with every convenience required for health and comfort. The present monthly expenditure for wages of the from 140 to 150 men, and materials for the quarry, is between 600*l*. and 700*l*. A good cartroad has been made into the quarry from the turnpike-road, but no steps have been taken towards the construction of a railway; there being several schemes before Parliament for the construction of railways through the district, in close proximity to the quarry, either of which will afford all the facilities for carriage to a shipping port which this quarry needs, and one of which it is expected, will be conceded in the next session of Parliament.

THE PRINCESS OF WALES SLATE QUARRY.—This quarry, which has been recently purchased from the Prince of Wales Slate Company, commenced working on November 1 last, since which the old quarry has been cleared to the extent of about 30 yards in length, a line of rails laid down, and the widening of the quarry begun. There is excellent slate rock on both sides of the quarry, from which slates of first quality and large sizes have already been made, for as the opening is enlarged the make of slates will be increased. A level is now being driven 18 yards below the present quarry to lay open another gallery of that depth, the whole of which will be in solid slate rock. Ten galleries of similar depth can be formed in less than 600 yards in length, and owing to the formation of the ground these galleries can be opened on both sides of the vein, and worked towards and into each other. The advantages for tip and working are very great, and the proposed railways will afford every facility for transit which can be desired. In a few months the make of slates will, probably, treble the cost of working the galleries at present laid out. Samples of the slates have been sent to the offices in London.

NOTES FROM LECTURES BY DR. PERCY, AT THE ROYAL SCHOOL OF MINES—COPPER AND COPPER SMELTING.

COPPER is a metal of great antiquity, and the date of its discovery entirely unknown to us. Some account of the early history of this metal would be most interesting, but we are without such information; we must, then, leave the consideration of its past history to the antiquarian, and take copper in the various forms in which Nature presents it to us, and trace the means by which the metal is extracted from its mineralised compounds, and rendered available for the purposes of the artificer.

The metallurgical history of a metal is properly preceded by an account of its properties, and the chemical reactions and changes which it undergoes when exposed to the action of other elementary bodies at high temperatures. Dr. Percy thus commenced the subject of copper, and spoke first of those compounds of copper and sulphur, and dwelt especially on that reaction which is so important in copper smelting—the result obtained when disulphide of copper is heated with its oxidised compounds, and where the sulphur of the former is in such proportion to the oxygen in the latter as to make sulphurous acid; on heating such a mixture, the sulphur and oxygen will combine, and be entirely evolved as sulphurous acid, and the copper left behind in the metallic state. The dioxide of copper is another most important compound, which, when heated with metallic copper, is dissolved by it, and copper containing it is termed dry copper. This dry copper is brittle, unfit for beating out, or for manipulation generally. It seems, however, that a small quantity of this dioxide is necessary to make metallic copper malleable. The combinations of copper and phosphorus possess one or two peculiar properties. For example, best selected copper, if melted and cast into a mould, forms a most imperfect casting; but if to such best selected a small quantity of phosphorus be added, a sound and a valuable metal is directly obtained. The general action of phosphorus on copper is that of rendering it hard. Of the action of the other metallic elements on copper, that of lead is of the most importance; for, with an admixture of even 2 per cent. of lead, copper so adulterated may be readily rolled. There, of course, still remain other elements, the action of which on copper is important to the manufacturer, but here it is impossible to introduce them all.

The specific gravity of metallic copper differs greatly. To cast metallic copper, or, rather, to make a sound casting with this metal, under ordinary circumstances, is next to impossible; but if we cast it in a mould in the centre of a burning gas flame, we get a perfectly sound casting, and the specific gravity of the metal is raised when so cast from 8.535 to 8.958. The electric conductivity of copper is one of its most important characteristics. A small amount of impurity very much impairs this property. If we take the electric conductivity of silver wire at 100, pure copper is expressed in the scale by 93; but this same copper, if alloyed with even a small quantity of dioxide, is reduced to 73. Phosphorus and arsenic reduce immensely the conductivity of copper—thus, 21 per cent. phosphorus reduces the conductive power of copper to 7.24; and 54 per cent. arsenic reduces the conductive power of copper to 6. Before now entering on the different modes of smelting copper, we must describe briefly the sources and nature of the ores. Native copper is not unfrequently found; the largest masses known have been in the neighbourhood of Lake Superior, and one mass of 500 tons was found in the decomposing trap of that district. With the native copper silver and mercury are also found. Besides these lumps of copper, there is found in Peru a sandstone impregnated with grains of metallic copper, and this sandstone is crushed, and washed, and the copper brought here as copper barilla. Native copper is very tough, and may be considered as a most expensive sort of copper to work, especially when in large masses. Next to native copper in value is the red oxide, which contains when pure 88.78 per cent. of copper. It is found chiefly in Cornwall, South America, and Australia. Then we have black oxide of copper, containing 79.82 per cent. of metal when pure, but in such a state it is rarely found in nature. Green carbonates of copper come next in the list, and contain 57.73 per cent., and are found in Cornwall, Siberia, West Coast of Africa, and Australia. Blue carbonate is not quite so rich, and contains 55.16 per cent. of copper. Vitreous copper—mind, not grey copper, but the disulphide—contains about 79.79 per cent. Purple copper ore contains sulphide of iron in the form of sesquioxide, and when pure yields 55.54 per cent. of copper. Copper pyrites yields 34.81 per cent. of copper. The other more valuable ores of copper commercially are—grey copper, which contains antimony, silver, and arsenic; chrysocolla, which is a hydrated silicate of copper; and atacamite, which is a hydrated oxychloride of copper.

We will now pass on to the methods of extracting copper from its ores, and begin with the Welsh process of copper smelting, confining ourselves to the simple explanation of the different stages of the process. The furnaces in which the copper is smelted in Wales are all reverberatory, but the details of the operations are not identical in any two works; we will, therefore, confine ourselves to that series of processes which are the fewest by which the copper can be obtained. The smelter's first object is to mix his ores so that the product may contain from 8 to 10 per cent. of metallic copper; with such a mixture, the first operation is to get rid of all the earthy matter contained in the ore. Calcination in many cases precedes the first melting, although in some works no such calcination is allowed. Where, however, it is done, the operation is performed in a flat-bedded furnace, termed a calciner. The length of the calcination will depend on the nature of the ore to be treated. In practice, the ore is spread uniformly over the bed of the furnace, and air is allowed free access through the doors, and through special flues and openings in the fire bridge. The amount of ore calcined at one time is about 7 tons. The furnace is charged through the top, where there are two openings for the purpose, and each provided with a hopper for convenience of charging. On either side of the furnace are three doors, and two bosses between these doors on each side, so as to obviate any difficulty in raking to and fro the whole of the charge during the calcination; these bosses should be angular. From end to end of the furnace is a channel to allow of the free access of air, and this is connected with the furnace by three short flues, which conduct an abundant supply of air through the fire-bridge. The object to be aimed at is to effect the calcination without permitting the ore to clot, and to assist in preventing this dreaded result the top of the arch of the firebridge is extended over the furnace, and it is called a curtain arch. The furnace is built upon arches, and between each side door there are openings connected with the arches, in the floor of the furnace, kept covered during the operation of calcining, but opened at the conclusion, and the ore is raked out through them. The ore is damped after being removed, and so cooled, and when the temperature of the furnace is sufficiently reduced by lowering the fire, another charge is introduced, and treated in precisely the same way. The furnace is for strength sake braced together by standards of cast-iron, and held in position by tie rods.

We pass now to the second process, which is one of fusion, and one in which we get rid of all the extraneous matter in the ore except the silica. In carrying out this principle of fusion we take the calcined ore with a quantity of slag containing silicate of protoxide of iron, and containing about 2 per cent. of copper, and the result of one of the after processes, and fuse this mixture, when we obtain two products—coarse metal,

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MANUFACTURERS OF PORTABLE AND FIXED STEAM ENGINES, MACHINERY FOR PUMPING, HOISTING, GRINDING, SAWING, &c., ENGINES FOR STEAM CULTIVATION, SELF MOVING ENGINES FOR COMMON ROADS AND AGRICULTURAL PURPOSES GENERALLY.
STAMP END WORKS, LINCOLN; and
78, LOMBARD STREET, LONDON.
ALSO AT
LOWENGASSE No. 44, LANDSTRASSE, VIENNA, and GEGENUBER DEM BAHNHOF, PESTH.
Descriptive, illustrated, and priced catalogues free per post.
SPECIAL DRAWINGS WHEN REQUIRED.
THE BEST STEAM THRASHING MACHINERY MADE.
First Class Silver Medal, Royal Polytechnic Society, Falmouth, 1864.

CREASE'S PNEUMATIC TUNNELLING ENGINE,
for SUPERSEDING THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 fm. per diem, and to sink shafts at the rate of 2 fms. in three days.
Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.
Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE, Tavistock, Devon.

Swan Rope Works.

GARNOCK, BIBBY, AND CO.,
CHAPEL STREET, LIVERPOOL,
MANUFACTURERS OF FLAT AND ROUND HEMP AND IRON AND STEEL WIRE ROPES FOR MINING, RAILWAY, AND SHIPPING PURPOSES.
MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER, AND THIRTY PER CENT. CHEAPER than Russian hemp rope.
WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD OF STRENGTH.

Prize Medal Awarded Great Exhibition, 1851, and International Exhibition, 1862.

PATENT SAFETY FUZE WORKS, TUCKINGMILL, CORNWALL.—We beg respectfully to inform the public that since the decease of the late Mr. THOMAS DAVEY this firm has consisted of JOHN SOLOMON BICKFORD, GEORGE SMITH, FRANCIS PRYOR, SIMON DAVEY, and WILLIAM BICKFORD SMITH. It is requested that all letters may be addressed, and all cheques and drafts made payable to us, as BICKFORD, SMITH, AND CO.

TO CIVIL ENGINEERS, RAILWAY CONTRACTORS, MINE AGENTS, QUARRY PROPRIETORS, EXCAVATORS, AND OTHERS.

PATENT SAFETY BLASTING POWDER COMPANY (LIMITED).
MANUFACTORY, SOUTH DOWN, NEAR DEVONPORT.

The company is PREPARED TO EXECUTE ORDERS for this POWDER to ANY EXTENT. The chief recommendations of this valuable invention consist in—

1.—ITS SAFETY.
2.—The SMALL AMOUNT OF SMOKE, and COMPARATIVE FREEDOM FROM NOXIOUS GASES AFTER DISCHARGE.
3.—ITS CHEAPNESS.

1.—The Patent Safety Blasting Powder being NON-EXPLOSIVE, unless confined by tamping in a hole, none of the fearful and fatal accidents arising from all other kinds of powder employed for blasting can possibly attend its use, nor can explosion take place while the powder is deposited in store, or during transit, or in the operation of boring out the charge from holes which may miss fire from defective fuse.

2.—In consequence of the small quantity of smoke produced by the blast, and the almost total absence of noxious gases, the men employed are enabled to resume their work without loss of time or injury to their health.

3. CHEAPNESS.—The Patent Safety Blasting Powder is cheaper and stronger than ordinary powder, the evidence of those who have adopted its use proving that a SAVING is thereby EFFECTED of from TWENTY-FIVE to THIRTY PER CENT.

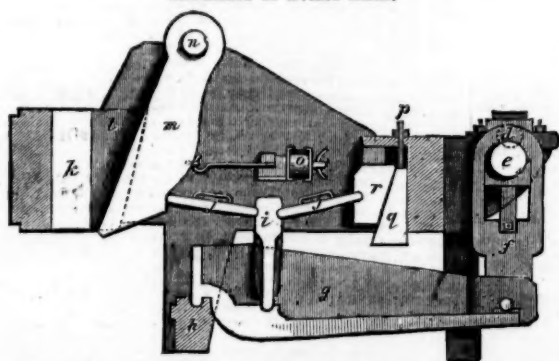
The company are also executing numerous orders, both for the home market and for foreign countries, of the Patent Safety Blasting Powder, made up into waterproof cartridges. These are especially adapted for wet ground, for holes difficult to charge, and for all work where dispatch is of consequence.

Copies of testimonials, and any further information connected with the powder, may be obtained from Mr. CHARLES DAVEY, general agent, Devonport; or from the Secretary, at the manufactory. —Dated South Down, September 19, 1864.

THE UNITY PATENT SAFETY FUZE COMPANY
SCORRIER, CORNWALL, SOLICIT ORDERS for the DIFFERENT KINDS of SAFETY FUZE which they are PREPARED to SUPPLY, of SUPERIOR QUALITY, and of ANY LENGTH.

CHARLES DAVEY AND CO.,
SAFETY FUZE MANUFACTURERS,
ST. HELEN'S JUNCTION, LANCASHIRE.

BLAKE'S PATENT STONE BREAKER,
OR ORE CRUSHING MACHINE,
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England.

The above section illustrates Blake's Stone Breaker, just as made the last five years, and is fully protected in every part by patents.

Extract from Specification:—A short but powerful vibration is imparted to one or both of the jaws by any convenient arrangement, and combination of powerful levers, worked by a crank or eccentric on the main shaft.

LEGAL PROCEEDINGS will be taken at once against any person or persons found making, using, or vending any machine, the construction of which will constitute an infringement on the above patent. Read extracts of testimonials:—

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for 1 r road metal, free from dust. Messrs. ORO and MARSDEN.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Owoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Fremont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or 875 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—
H. R. MARSDEN, SOHO FOUNDRY,
MEADOW LANE, LEEPS.

Only maker in the United Kingdom.

BASTIER'S PATENT CHAIN PUMP,
APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, armers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilizes from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 percent. less than the usual pumps employed for mining purposes.

3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.

5.—It raises with the water, and without the slightest injury to the apparatus, sand, mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.

BASTIER'S PATENT CHAIN-PUMP may be seen daily in operation at Messrs. SAMUEL BAKER and Co.'s Patent Rice Starch Works, Bromley-by-Bow, London, E. Cards of admission to be had on application to the inventor and patentee, Mr. J. U. BASTIER, C.E., 12, Gower-street North, London.

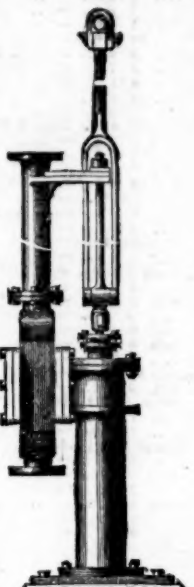
J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT HIS PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.

OFFICES, 12, GOWER STREET NORTH, LONDON.
London, March 21, 1865. Hours from Ten till Four. J. U. BASTIER C.E.

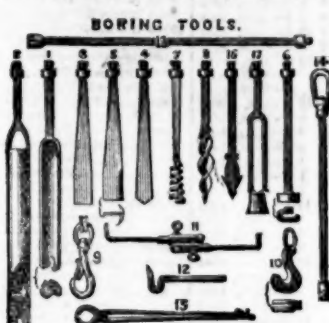
CLINTON AND OWENS (LATE B. FOWLER AND CO.),

WHITEFRIARS STREET, FLEET STREET, LONDON,
HYDRAULIC AND GENERAL ENGINEERS,

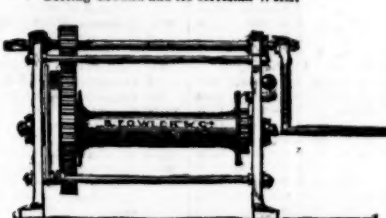
MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND, HORSE, STEAM, OR WATER POWER.



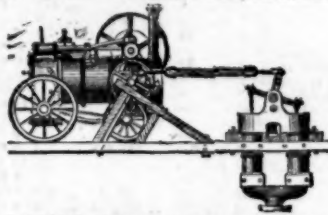
Improved Double-action PUMPS.



BORING TOOLS OF ALL DESCRIPTIONS, for Testing Ground and for Artesian Wells.



PULLEY BLOCKS, CRABS, and HOISTING TACKLE, of every description, and of superior manufacture.

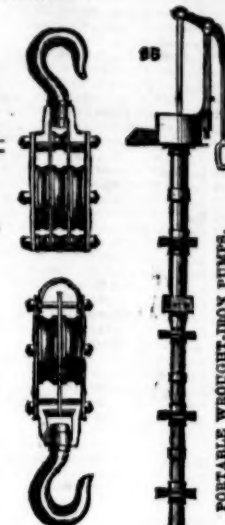


PORTABLE STEAM ENGINES, with DOUBLE BARREL, or other PUMPS, for any depth, ON HIRE OR PURCHASE.

PORTABLE WROUGHT-IRON HAND PUMPS, of all sizes.



USEFUL DOUBLE BARREL PORTABLE FORCE PUMPS.

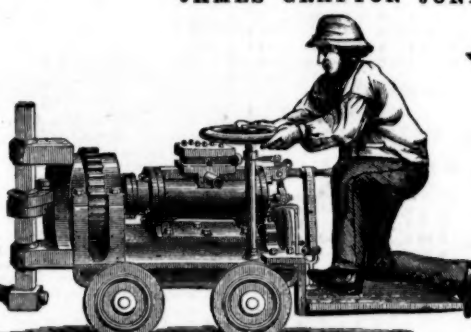


PORTABLE WROUGHT-IRON PUMPS.

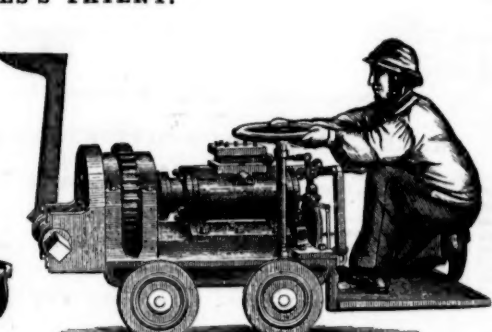
PRICE LISTS, ESTIMATES, DRAWINGS, and FULL PARTICULARS of anything relating to work of classes noted above, may be had on application.

COAL CUTTING MACHINERY.

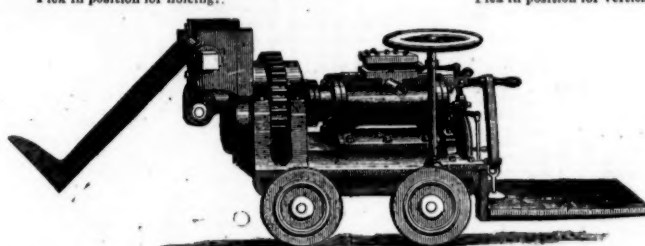
JAMES GRAFTON JONES'S PATENT.



Pick in position for holing.



Pick in position for vertical cut downwards.



Pick in position for vertical cut upwards.

Messrs. JONES and LEVICK, proprietors of this patent, are prepared to supply these Machines, which are on an improved principle, and are constructed to work the coal at any angle from the horizontal to the vertical, thus rendering them capable of "holing" at any angle, and of driving "headings." They are simple and substantial in construction, and are not likely to get out of order. They are already successfully employed in the Barnsley coal district, and are being introduced into the South Wales and other coal mining districts. They are also suitable for mining the argillaceous ironstones of the coal measures, as well as working other mines and quarries.

N.B.—Air Compressing Machinery will be supplied, or plans and specifications furnished.

Applications to be made to Messrs. FREDERICK LEVICK and Co., 4, Charlotte-row, Mansion House, London; or Messrs. LEVICK and SIMPSON, Blairston Ironworks, near Newport, Monmouthshire.

COAL CUTTING MACHINERY.

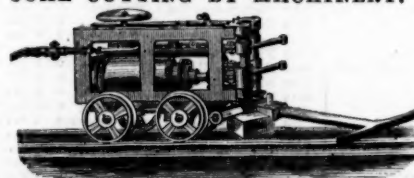
The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN THE COST and IMPROVE THE AVERAGE SIZE OF THE COAL, to LIGHTEN THE LABOUR, and also to MODIFY THE SANITARY CONDITION OF THE MINE.

All communications to be made to Messrs. FIRTH, DUMTHORPE, and BOWEN, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

COAL CUTTING BY MACHINERY.



MESSRS. RIDLEY AND CO. have, by recently PATENTED IMPROVEMENTS, COMPLETED their TRUNK COAL CUTTING MACHINE, WORKED BY COMPRESSED AIR, and are NOW PREPARED TO NEGOTIATE for the USE, and to SUPPLY MACHINES, which will be found to COMBINE SIMPLICITY OF CONSTRUCTION with PORTABILITY and ECONOMY IN WORKING. By the use of these machines a CONSIDERABLE SAVING OF COAL IS EFFECTED, and the COST OF LABOUR MUCH REDUCED. Each machine will be guaranteed as to its capabilities, &c.

All applications to be made to Messrs. RIDLEY and Co., No. 11, South-street, Finsbury London, E.C.; or Mr. PERCY BANKART, agent, 9, Clement's-lane, E.C.

* COLLIERY PROPRIETORS are CAUTIONED against PURCHASING or USING MACHINES, the construction of which will constitute an INFRINGEMENT of the ABOVE PATENT.

THOMAS TURTON AND SONS,

MANUFACTURERS OF

CAST STEEL FOR PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and

FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL, BLISTER STEEL, SPRING STEEL, GERMAN STEEL.

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.



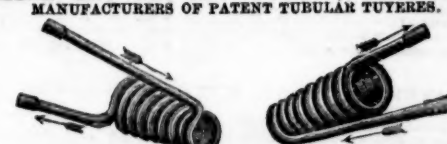
SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, —35, QUEEN STREET, CANNON STREET, CITY, E.C.
where the largest stock in the world may be selected from.

International Exhibition, 1862—Prize Medal.



JAMES RUSSELL AND SONS
(the original patentees and first makers of wrought-iron tubes), of the CROWN PATENT TUBE WORKS, WEDNESBURY, STAFFORDSHIRE, have been AWARDED A PRIZE MEDAL for the "good work" displayed in their wrought-iron tubes and fittings.
Warehouse, 81, Upper Ground-street, London, S.

MESSRS. KNOWLES AND BUXTON, CHESTERFIELD.
MANUFACTURERS OF PATENT TUBULAR TUYERES.



The PATENT TUBULAR TUYERE possesses GREAT ADVANTAGES over the ORDINARY TUYERES, both for its DURABILITY and EASY WORKING. A current of cold water going direct to the nozzle prevents their destruction, however much they may be exposed to the fire.

We repair them at half the first cost, making them equal in size to new ones, all parties returning them carriage paid.

No. 1 tuyere, 16 in. long	28s. each.
No. 2 " 18 "	32s. "
No. 3 " 20 "	36s. "
No. 4 " 22 "	40s. "
No. 5 " 24 "	44s. "

Delivered at Chesterfield station. Terms, net cash quarterly.

THE STOCKTON AND HARTLEPOOL MERCURY AND MIDDLESBOROUGH NEWS (published at Hartlepool) is eminently the organ of the Coal, Iron, and Iron Ship-building Trades in the extensive Mining and Maritime District of South Durham and Cleveland, with which it has been closely identified since its origin. The "Mercury" was for years the only newspaper published in South Durham and Cleveland, and is yet the only one published more than once a week. Advertisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764).

Published every Saturday, price 2d., or quarterly 2s. 2d.

THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.
Published every morning, price 1d.

Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

DR. WATSON, F.R.S. (of the Lock Hospital, and College of Physicians and Surgeons) on the Self Cure of Nervous and Physical Debility, Spermatorrhoea, Decline of Manly Vigour, and Diseases of Indiscretion, with Means for Perfect Restoration, free for six stamps, by Dr. WATSON, 1, South-crescent, Bedford-square, London. Consultation daily from Eleven till Two and Six till Eight. Sunday, Ten till Twelve.

NEW MEDICAL GUIDE.

DR. SMITH, who has had twenty years' practical experience in the treatment of Debility, Spermatorrhoea, Disorders of the Nervous System, &c., has published A GUIDE (108 pages) for Self-Cure. Sent to any address on receipt of two stamps. Dr. SMITH may be consulted personally (or by letter) in all private and confidential cases.—Address, SMITH and Co., 8, Burton-crescent, Easton-road, London, W.C. Consultations daily from Eleven to Nine.

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BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1900	Alderley Edge (cop.), Cheshire [L.]	10 0 0	—	—	—
4000	Bedford United (copper), Tavistock	2 6 8	—	—	—
1248	Boscan (tin), Cornwall [L.]	10 0 0	—	—	—
200	Botolph Claydon (tin), Cornwall [L.]	10 0 0	—	—	—
8000	Broughton (lead), Cardigan [L.]	10 0 0	—	—	—
314	Cargill (silver-lead), Newry [L.]	15 7 8	—	—	—
1600	Carbide (copper), Cornwall [L.]	15 0 0	—	—	—
2800	Clifford Amalgamated (cop.), Gwynedd	30 0 0	—	—	—
12900	Copper Mines of England	20 0 0	—	—	—
40000	Ditto	200 0 0	—	—	—
887	Cwm Ertin (lead), Cardiganshire [L.]	7 10 0	—	—	—
138	Cwmystwith (lead), Cardiganshire	60 0 0	—	—	—
280	Darwen Mines (sil.-lead), Durham	300 0 0	—	—	—
1024	Devon Gt. Con. (cop.), Tavistock [S.E.]	10 0 0	—	—	—
328	Dolcoath (copper), Cornwall [L.]	128 17 6	—	—	—
12800	Drake Walls (tin), Cornwall [L.]	3 1 0	—	—	—
512	East Bassett (cop.), Redruth [S.E.]	29 10 0	—	—	—
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6	—	—	—
800	East Darwen (lead), Cardiganshire	32 0 0	—	—	—
128	East Pool (tin), Cornwall	24 5 0	—	—	—
5000	East Rosewarne (cop., tin), Gwynedd	2 15 0	—	—	—
1904	East Wheal Loe (tin), Cornwall	2 15 0	—	—	—
8000	Foxdale (lead) Isle of Man [L.]	25 0 0	—	—	—
8000	Frank Mills (lead), Cornwall	3 18 6	—	—	—
12400	Great Laxey (lead), Isle of Man [L.]	4 0 0	—	—	—
5000	Great Wh. Vor (tin), Cornwall [S.E.]	40 0 0	—	—	—
119	Great Work (tin), Cornwall	100 0 0	—	—	—
1024	Herodotus (id.), near Liskeard [S.E.]	8 10 0	—	—	—
400	Lisburne (lead), Cardiganshire, Wales	18 15 0	—	—	—
2000	Mossy-Safe (lead) [L.]	20 0 0	—	—	—
8000	Marke Valley (copper), Cornwall	4 10 0	—	—	—
8000	Miners Boundary (lead), Wrexham [L.]	1 0 0	—	—	—
1800	Miners Mining Co. [L.] (id.), Wrexham	28 0 0	—	—	—
40000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	—	—	—
20000	Meadway (iron ore) [L.]	210 0 0	—	—	—
280	Nanty Mines (lead), Montgomery	20 0 0	—	—	—
6000	New Birch Tor and Vitrifer Con. (tin)	1 0 0	—	—	—
9288	New Trekerby (copper), St. Agnes	1 0 0	—	—	—
200	Parys Mines (copper), Anglesey [L.]	50 0 0	—	—	—
1132	Providence (tin), Uny Lelant [S.E.]	10 6 7	—	—	—
512	South Caradon (cop.), St. Cleer [S.E.]	1 0 0	—	—	—
4000	St. Day (tin), Cornwall	14 0 0	—	—	—
948	St. Ives Consols (tin), Cornwall	8 0 0	—	—	—
6000	Timor (cop., tin), Pool, Cornwall	9 0 0	—	—	—
1600	Torbay Hematite Iron [L.]	6 7 6	—	—	—
2000	West Bassett (copper), Illogan [S.E.]	1 10 0	—	—	—
3000	W. Chiverton (id.), Penryn [S.E.]	55 0 0	—	—	—
288	West Damsel (copper), Gwynedd	88 10 0	—	—	—
400	W. Wh. Soton (cop.), Camborne [S.E.]	47 10 0	—	—	—
512	Wheal Bassett (copper), Illogan [S.E.]	8 2 8	—	—	—
512	Wheal Jane (copper), Cornwall	10 0 0	—	—	—
4296	Wheal Kitty (tin), Cornwall	5 8 0	—	—	—
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	2 0 0	—	—	—
1024	Wheal Mary Ann (id.), Menheniot [S.E.]	8 0 0	—	—	—
100	Wheal Mary Ann (id.), Menheniot [S.E.]	13 14 0	—	—	—
80	Wheal Owles (tin), Cornwall	7 0 0	—	—	—
396	Wheal Soton (tin), Cornwall	88 10 0	—	—	—
1040	Wheal Trevelyan (sil.-id.), Liskeard [S.E.]	5 17 0	—	—	—
7000	Wicklow (copper) [L.]	2 10 0	—	—	—

* Dividends paid every two months. † Dividends paid every three months.

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340	Boscan (tin), St. Just	20 10 0	—	—	—
3000	Chiverton (lead), Penryn [S.E.]	6 0 0	—	—	—
384	Conduvor (cop., tin), Camborne	70 10 0	—	—	—
3480	Cook's Kitchen (copper), Illogan	11 10 0	—	—	—
1024	Craig Hill (copper), Redruth	12 0 0	—	—	—
1024	Craig Hill (copper), Redruth	12 0 0	—	—	—
4076	Darwen and Gwynedd (copper), Tavistock	10 0 0	—	—	—
3000	Dyffryn (lead), Wales	12 0 0	—	—	—
940	Fowey Consols (copper), Tavydorth	4 0 0	—	—	—
8000	Great South Tois (copper), Redruth	0 14 6	—	—	—
1798	Great Wheal Fortune (tin), Breage	10 12 0	—	—	—
10240	Gunnislake (Clitters' Adit) (copper)	0 2 0	—	—	—
180	Levant (copper), St. Just	2 10 0	—	—	—
2000	Levant (copper), St. Just	4 0 0	—	—	—
8000	Orehead (lead), Falmouth [S.E.]	0 0 0	—	—	—
8400	Par Consols (cop., tin), St. Agnes	1 0 0	—	—	—
1772	Pelbourn (tin), St. Agnes	15 0 0	—	—	—
512	Pelbourn (tin), St. Agnes	8 0 0	—	—	—
8000	Rosewell Hill and Ransom United	2 14 0	—	—	—
8000	South Exmouth (lead), Christow	1 14 0	—	—	—
512	South Tois (cop.), Redruth	8 0 0	—	—	—
496	S. Wh. Frances (cop.), Illogan [S.E.]	18 18 9	—	—	—
2800	Spearside Moor (tin), Cornwall	22 17 9	—	—	—
1772	Trelawny Consols (tin), Cornwall	0 0 0	—	—	—
1000	Trumpet Consols (tin), near Helston	11 10 0	—	—	—
12000	Twelve Apostles Amal. (id.), Wrexham	1 0 0	—	—	—
4000	Vigra and Clogau (copper) [L.]	10 10 0	—	—	—
1024	Wendron Consols (tin), Cornwall	10 10 0	—	—	—
80	West Burton Gill (lead), Yorkshire	50 0 0	—	—	—
1024	West Caradon (cop.), Liskeard [S.E.]	9 0 0	—	—	—
1000	Wheal Bassett and Grylls (tin)	7 0 0	—	—	—
1024	Wheal Friendship (copper), Cornwall	20 0 0	—	—	—
808	Wheal Margaret (tin), Uny Lelant	11 17 6	—	—	—
2044	Wheal Trevelyan (tin), Gwynedd	6 11 3	—	—	—
6400	West Fowey Consols (tin and copper)	7 10 0	—	—	—

FOREIGN DIVIDEND MINES.

30000	Australian (cop.), S. Australia [S.E.]	7 7 6	—	—	—
2484	Burra Burra (copper), South Australia	0 0 0	—	—	—
6000	Central American (silver) [L.]	5 0 0	—	—	—
15000	Cape Copper Mining [L.] [S.E.]	7 0 0	—	—	—
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	—	—	—
100000	Don Pedro No. Del Rey [L.] [S.E.]	0 12 6	—	—	—
70000	English and Australian	6 0 0	—	—	—
18000	East Indian Coal, Calcutta [L.]	10 0 0	—	—	—
28000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	—	—	—
8000	Gen. Mining Co., Nevada [S.E.]	3 10 0	—	—	—
40000	Kapunda Mining Co., Australia [S.E.]	1 0 0	—	—	—
10000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	—	—	—
10000	Lusitania (Portugal) [S.E.]	2 0 0	—	—	—
9275	New Wildberg (copper)	2 0 0	—	—	—
80000	Panuello (copper) [L.] [S.E.]	3 0 0	—	—	—
10000	Pontybaud (id., lead), France [S.E.]	0 0 0	—	—	—
87500	Port Philadelp. (id., Clines) [S.E.]	1 0 0	—	—	—
10000	St. John del Rey [L.] [S.E.]	15 0 0	—	—	—
43174	United Mexican (sil.), Mexico [S.E.]	28 0 0	—	—	—
10000	Vancouver (lead) [L.] [S.E.]	5 0 0	—	—	—
25000	Vancouver (lead) [L.] [S.E.]	1 0 0	—	—	—
20000	West Canada Mining Company [L.]	1 0 0	—	—	—
45000	Yudamutana (cop.), S. A. [L.] [S.E.]	1 0 0	—	—	—

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Alton and Quannagen Unt. (cop.) [L.] [S.E.]	4 10 0	—	—	—
10000	Copiale Mining Company, Chile [L.] [S.E.]	16 0 0	—	—	—
10000	Gt. Barrier Land, Min. Co., N. Ze. [L.] [S.E.]	0 0 0	—	—	—
10815	Marquitta and New Granada [S.E.]	1 0 0	—	—	—

NON-DIVIDEND FOREIGN MINES.

35000	Alamitos (lead), Spain [L.] [S.E.]	1 0 0	—	—	—
100000	Anglo-Philadelp. (gold) [L.] [S.E.]	5 0 0	—	—	—
9000	Bear's Tin Streaming Company [L.]	5 0 0	—	—	—
25000	Capula (silver), Mexico [L.] [S.E.]	1 0 0	—	—	—
17000	Central Italian (copper) [7000 ad paid]	0 0 0	—	—	—
10000	Copiale Smelting [L.]	10 0 0	—	—	—
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	—	—	—
50000	East del Rey (gold), Brazil [L.] [S.E.]	1 0 0	—	—	—
8000	English and Canadian Mining Company [L.]	5 0 0	—	—	—
40000	Fortuna (copper), West Australia [L.]	2 0 0	—	—	—
80000	Frontino and Bolivia (gold), South Australia [L.] [S.E.]	1 0 0	—	—	—
94000	Great Northern (copper), South Australia [L.] [S.E.]	1 0 0	—	—	—
94000	Hindostan (copper), Bengal [L.] [S.E.]	3 0 0	—	—	—
4000	Hop Silver-Lead and Copper Mining Co. [L.]	25 0 0	—	—	—
10000	Karibits Colliery Company [L.]	1 0 0	—	—	—
180000	Lagunas (sulphur, copper), Portugal [L.]	1 0 0	—	—	—
60000	Montes Aures (gold), Brazil [L.] [S.E.]	2 0 0	—	—	—
60000	Nova Scotia (lead and gold) [L.] [S.E.]	1 0 0	—	—	—
10000	Oreos (copper), New Zealand [L.] [S.E.]	1 0 0	—	—	—
15000	Pacheco Silver Mining Company, Mexico [L.] [S.E.]	1 0 0	—	—	—
6000	Peel River Lead and Mineral (Limited)	100 0 0	—	—	—
23000	Quebrada (copper), Venezuela [L.] [S.E.]	6 10 0	—	—	—
40000	Rosa Grande (gold), Brazil [L.] [S.E.]	0 0 0	—	—	—
10000	San Roque (lead), Spain	5 0 0	—	—	—
80000	Santa Barbara (gold), Brazil [L.] [S.E.]	0 10 0	—	—	—
130000	Scottish Australian Mining Company [L.] [S.E.]	0 17 6	—	—	—
15000	South Europe Mining Company, Spain [L.] [S.E.]	5 0 0	—	—	—
12000	Tepitit Colliery Co., Bohemia [L.] [S.E.]	5 0 0	—	—	—
80000	Valdemar Mining Company [L.] [S.E.]	10 0 0	—	—	—
50000	Vallanueva (gold), Italy [L.] [S.E.]	0 10 0	—	—	—
45000	Victor Emanuel (copper), Italy [L.] [S.E.]	1 0 0	—	—	—
1000	Wheal Ellen (copper), South Australia [L.] [S.E.]	110 0 0	—	—	—
8000	Worthing (copper), South Australia [L.] [S.E.]	5 0 0	—	—	—
75000	Yorke Peninsula, South Australia [L.] [S.E.]	1 0 0	—	—	—

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
700	Aberdorey (sil.-lead), Merioneth	4 10 0	—	—	Nov. 1863
1000	Alfry-Crib (lead) [L.] [S.E.]	4 12 6	—	—	Nov. 1863
6000	Bagger (tin) [L.]	2 0 0	—	—	Nov. 1863
4000	Bedford Cons. (cop.), Tavistock	2 10 0	—	—	Nov. 1863
8200	Bell's Ann (lead), Holywell	2 10 0	—	—	June, 1864
500	Bullins (lead)	2 0 0	—	—	Nov. 1863
6000	Boscawen (tin), Kenwyn	2 10 0	—	—	Feb. 1864
5000	Bottle Hill (tin), Plymouth	1 8 6	—	—	May, 1864
30000	Bromford (id.), Ministerialy Salop	1 0 0	—	—	Nov. 1863
1000	Brynmor Hill (lead), Flint	30 0 0	—	—	Aug. 1863
600	Bryn Gwilog (lead), Flint	9 0 0	20	18 18	June, 1864
1837	Brynmor (lead), Llanidloes	8 7 6	—	—	June, 1864
6300	Buller's Blaser (cop.) Redruth	4 11 6	—	—	Feb. 1864
915	Calvada (tin), Wexford	25 3 6	—	—	Aug. 1863
1000	Camborne Consols (copper)	18 10 0	—	—	Feb. 1864
4000	Camborne Vein & Wh. Francis [L.] [S.E.]	8 4 0	2 2 1/2	2 2 1/2	Oct. 1863
75000	Cambrian Consolid. (id.) [L.] [S.E.]	1 0 0	—	—	Aug. 1863
8000	Cape Cornwall (cop.) [L.] [S.E.]	1 0 0	—	—	Aug. 1863
12000	Caradon & Phoenix Cons. [L.] [S.E.]	1 0 0	—	—	Aug. 1863
914	Caradon Cons. (cop.), St. Cleer	29 6 6	—	—	Sept. 1864
10000	Caradon Vale (copper)	—	—	—	—
6000	Carn Camborne (cop.), Camborn.	1 11 0	20s.	24s. 30s.	Oct. 1863
2048	Carnarvon (tin), St. Just	4 10 0	—	—	June, 1864
30000	Carnarvon (3200 ad. paid, 16800 ad. paid)	1 10 0	—	—	—
10000	Castleward, Ireland [L.]	1 0 0	—	—	Nov. 1863
2000	Cefn Crician (id.), Flint [L.] [S.E.]	2 10 0	—	—	Nov. 1863
800	Cefn Cwm Brwyno (lead)	4 0 0	—	—	Sept. 1863
2000	Central Mines (lead) [L.] [S.E.]	2 14 0	—	—	Nov. 1863
4000	Chiverton Moor (lead)	3 0 0	—	—	Nov. 1863
4000	Clara Unit., Pontefract [L.] [S.E.]	3 2 0	—	—	Oct. 1863
1024	Cleaver's Hill (tin), St. Stephen's	0 2 0	—	—	Jan. 1864
3000	Clevedon (iron), [L.] [S.E.]	5 10 0	—	—	—
787	Clish & Westworth (tin), Cornwall	23 10 0	—	—	Aug. 1863
2000	Clovenagh Wood (tin) [L.] [S.E.]	3 0 0	—	—	Oct. 1863
16000	Coalbrookdale & Bond [L.] [S.E.]	10700 15s. pd.	—	—	Dec. 1863
60000	Connors (cop., silph.) [L.]	1 0 0	—	—	Nov. 1863
6000	Cornish Clay and Tin [L.]	1 0 0	—	—	Nov. 1863
12000	Cornwall (tin) [L.] [S.E.]	4000 30s. pd. 5000 15s. pd.	—	—	Nov. 1863
861	Crane (copper),	7 0 0	—	—	Oct. 1863
30000	Craner and Wh. Abraham [L.]	2 10 0	—	—	Nov. 1863
12000	Craikie (cop.), Tavistock	2 13 0	—	—	April, 1864
2500	Crown Consols (cop.), Crown	5 0 0	—	—	Oct. 1863
2000	Crowlwm (lead), Llanidloes	1 11 0	—	—	Dec. 1863
8000	Cuddra (cop., tin), St. Austell	4 5 0	—	—	July, 1864
10000	Cwmymlog (sil.-id.), [L.] [S.E.]	2 0 0	—	—	May, 1864
5000	Dale (lead), North Stafford.	1 0 0	—	—	Nov. 1863
1000	Dargen (lead) [L.] [S.E.]	10 8 0	—	—	Nov. 1863
573	Ding Dong (lead),	10 10 0	—	—	Dec. 1863
20000	Dolwenny (gold) [L.] [S.E.]	0 15 0	—	—	Aug. 1863
1000	Eaglebrook (lead) [L.] [S.E.]	17 9 0	—	—	Dec. 1863
1000	East Bassett and Grylla (tin)	2 7 6	—	—	Aug. 1863
6000	E. Bottle Hill (tin), Plymouth	0 4 6	—	—	Aug. 1863
5000	East Cambrian (gold) [L.] [S.E.]	0 15 0	—	—	Feb. 1864
6000	East Carn Brea (cop.) Redruth	3 15 0	6 1/2	6 1/2	Feb. 1864
2000	East Chiverton (lead)	2 18 0	1 1/2	1 1/2	Nov. 1863
40000	E. Cloagau (gold), Merio. [L.] [S.E.]	0 6 0	—	—	Mar. 1864
5000	E. Falmouth (sil.-id.), Merioneth	2 9 0	4 1/2	3 1/2	April, 1864
6000	E. G. Work (tin), Breage [L.] [S.E.]	3 10 0	—	—	Oct. 1863
5000	E. Gunnelsale & S. Bedd. (cop.)	7 19 6	—	—	Sept. 1863
6145	East Jane (sil.-id.), Cardinham	2 10 6	—	—	Dec. 1863
6000	East Laxey (lead) [L.] [S.E.]	2 0 0	2 1/2	2 1/2	July, 1864
1024	E. Margaret (tin), Ury Lelant	21 15 0	—	—	Nov. 1863
5000	E. Poberro (tin) [L.] [S.E.]	4000 12s. 6d. pd.	—	—	Nov. 1863
3896	E. Providence (tin), Ury Lel.	4 9 8	2 1/2	2 1/2	Sept. 1863
250	East Saeafel (lead) [L.] [S.E.]	0 10 0	2 1/2	2 1/2	Dec. 1863
6000	E. St. Agnes (cop.), Camborne	0 10 0	—	—	Nov. 1863
861	East Tolgus (cop.) Redruth	90 0 0	—	—	Nov. 1863
1024	E. Treaskerby (cop.) Redruth	10 13 6	—	—	Dec. 1863
9600	East Wheal Abraham (copper)	0 5 0	—	—	Aug. 1864
1190	E. Wheal Aray (cop.), St. Cleer	11 17 0	—	—	Sept. 1864
1300	E. Wheal Ellen (cop.) St. Agnes	10 6 0	—	—	Oct. 1864
2048	East Wheal Grylla (tin copper)	2 2 6	—	—	July, 1864
5000	E. Wh. Russell, Tavistock [S.E.]	9 13 6	5	5 1/2	Dec. 1863
5000	East Wheel Vor (tin and cop.)	5 0 0	2 1/2	2 1/2	—
6000	E. Wessell (tin), [L.] [S.E.]	3 10 0	—	—	—
6144	Eather Unit. (tin), Cardinham	0 3 10	—	—	Sept. 1863
6000	Fortescue Cons. (sil.), Endellion	0 12 6	—	—	—
6000	Furze Hill Wood Cons., Buckl.	1 5 6	—	—	April, 1864
4096	Galidina Untd. (tin), Wexford	4 8 0	1	1 1/2	Sept. 1863
4000	Gawton (copper), Tavistock	2 11 6	—	—	Oct. 1863
6000	Gen. Min. Co. for Irei. (cop.)	4 0 0	—	4 1/2	—
10000	Glasgow Caradon Cons. (cop.) [L.]	1 0 0	—	—	Nov. 1863
1024	Godolphin (cop., tin), Crown.	0 10 0	—	—	Oct. 1863
2000	Goginias (tin) (lead)	0 10 0	—	—	Nov. 1863
2000	Goch Hill (lead), Flint	1 4 6	—	—	No call.
6144	Gonamena (copper), St. Cleer	4 11 0	3	—	Nov. 1863
2000	Goonzlon (copper), St. Neot.	1 17 6	—	—	Dec. 1863
2000	Gothic (silver-lead), Cardigan	1 0 0	1 1/2	—	No call.
486	Gramb. & St. Aub. (cop.) [S.E.]	63 0 0	—	—	Sept. 1863
6000	Great Brian (cop.) Redruth	6 11 6	—	—	Sept. 1863
4096	Great Caradon (cop.), St. Ives	2 16 0	1 1/2	1 1/2	Dec. 1863
5000	Great Devon and Bedford [L.]	1 17 0	—	—	Nov. 1863
5000	Great East Lool (tin), Helston	1 0 0	3	—	Sept. 1863
6000	Great Fowey Down (tin), Helston	1 0 0	—	4 1/2	Nov. 1863
6000	Gr. Retallack (sil.-id., blende)	2 6 6	—	—	April, 1864
5000	Great S. Chiverton (sil.-lead)	0 10 0	3 1/2	3 1/2	April, 1864
2000	Great Tregune Consols (cop.)	0 5 0	—	—	—
3000	Great West Chiverton (lead)	1 0 0	—	—	June, 1864
8730	Great Wheal Badden (tin)	6 16 0	—	—	May, 1863
6000	Gr. Wh. Busy (cop., tin), Ken.	13 14 6	2 1/2	2	April, 1864
5072	Gr. Wh. Grylla (tin copper)	1 0 0	—	—	No call.
6000	Gr. Wh. Metal, Breage [L.] [S.E.]	0 0 0	—	—	—
2000	Grit and Sand (lead), [L.] [S.E.]	10 0 0	—	—	July, 1864
2048	Grylla Consols (tin)	1 5 0	—	—	Nov. 1863
1000	Grylla Wheal Florence (tin)	1 0 0	—	—	Nov. 1863
3010	Gurlyn (cop., tin), St. Erith.	3 0 3	—	—	Nov. 1864
6000	Gwydyr Park Cons., Llanarv.	1 7 3	—	—	Feb. 1864
1000	Hallembeage (copper)	1 0 0	3 1/2	3 1/2	Nov. 1864
5000	Harwood (id.), Durham [L.] [S.E.]	0 6 6	—	—	Sept. 1864
5000	Havan (id.), Cardigan [L.] [S.E.]	4 5 0	—	—	Nov. 1864
2210	Hawke Moor (tin), Caladon [L.]	3 0 0	—	—	Nov. 1864
5000	Hendre (tin), Flint	3 0 0	—	—	Nov. 1864
5000	Hinton Down (cop.), [S.E.]	5 10 6	3 1/2	3 1/2	Dec. 1863
5000	Hlogan (tin and copper)	0 12 6	—	—	Nov. 1863
5000	Kelly Bray (id.), Callington	5 2 6	14s.	16s.	Nov. 1864
5000	Kewick (lead), Portinscale	5 6 6	—	—	Mar. 1862
96	Kilmorey (lead)	25 0 0	—	—	Feb. 1864
1000	Lady Bertha (cop.) [S.E.]	3 2 6	7 1/2	7 1/2	Oct. 1864
1000	Lanivet (tin) [L.] [S.E.]	1 0 0	—	—	Nov. 1864
919	Lands & St. Agnes (tin),	17 6 0	—	—	Mar. 1862
6000	Lelant Cons. (tin), Ury Lelant	35 0 0	—	—	Mar. 1862
5000	Llantwit Vardre (coal), [L.] [S.E.]	4 10 0	—	—	May, 1864
5000	Long Lake (lead), Flint	5 0 0	—	—	Oct. 1864
5000	Lower Park (id.), Denbigh [L.]	3 11 0	—	—	Jan. 1864
5000	Maudlin (copper), Lostwithall	4 0 0	7 1/2	—	Dec. 1864
4480	Merilyn (lead), Flint	4 1 6	—	—	June, 1864
5000	Merilyn Western Boundary [L.] [S.E.]	0 2 6	—	—	Sept. 1863
5000	Merlyn Bottom (lead)	2 0 0	—	—	—
5000	Molland (lead), Flint	2 0 0	—	—	Nov. 1862
024	Nangles (tin copper), Kea	19 0 0	22	20 22	Sept. 1864
1000	Nantoes (lead) [L.] [S.E.]	0 10 0	—	—	Sept. 1864
512	Nant Minera (lead), [L.] [S.E.]	6 0 0	—	—	Aug. 1864
4000	Nant-y-lago (id.), Merioneth	3 17 6	—	—	May, 1863
5000	New Clifford [L.] [S.E.]	1 6 0	—	1 1/2	Dec. 1864
5000	New Concord (sil.-id.) [L.] [S.E.]	1 0 0	—	—	—
5000	New Cornish (12000 ad. paid, 19000 12s. paid)	—	—	—	Dec. 1864
5000	New Crow (lead), Flint	1 0 0	—	—	Nov. 1864
5000	New East Birch Tor (tin)	0 2 6	—	—	—
514	New E. Russell (cop.), Tavistock	8 6 6	—	—	Nov. 1864
4000	Nether Heath (lead), Dufton	0 18 6	—	—	Oct. 1863
4000	New Hendra (tin cop.), Breage	4 1 0	—	—	Nov. 1864
5000	New Pembroke (tin and cop.)	0 9 0	—	—	May, 1864
024	New Roseworne (cop.) Gwinaer	2 10 0	—	—	Dec. 1864
5000	New S. Cardon (cop.), St. Cleer	0 16 6	—	—	Dec. 1863
5000	New Treleigh (tin), [L.] [S.E.]	—	—	—	Mar. 1864
960	New Treward (tin), Wexford	17 14 0	—	—	Oct. 1864
024	Newtownards Min. Co., Down	60 0 0	—	—	—
470	New Wendron (tin), Wendron	7 10 0	—	—	Dec. 1864
024	New Wh. Grylla (tin and cop.)	2 1 6	—	—	May, 1863
024	New Wheel Lovell (tin)	2 3 6	—	—	June, 1864
5000	New Wheel Martha (cop.) [L.]	1 0 0	1 1/2	—	Nov. 1864
4000	New Wh. Seton (cop.), Camb. 87 15 0	—	—	—	Oct. 1864
5000	New Wh. Tor & Metadon (tin)	—	—	—	Nov. 1864
024	New Bull (cop.) Redruth	26 3 0	—	—	Dec. 1864
5000	North Chiverton (lead)	1 0 0	2 1/2	2 1/2	Nov. 1863
5000	North Devon (sil.-id.) [L.] [S.E.]	0 18 0	—	—	Oct. 1863
5000	N. Dolcoath (cop.), Camborne	3 4 6	—	—	Aug. 1864
5000	North Downs (cop.) Redruth	2 16 4	1 1/2	1 1/2	Nov. 1864
5000	North Frances (cop.)	14 2 6	—	—	Dec. 1864
366	N. Grambler (cop.) Redruth	4 7 6	—	—	Aug. 1864
5000	N. Gr. Work, Breage [L.] [S.E.]	—	—	—	Aug. 1864
5000	N. Hadden (18000 ad. paid, 5000 8s. 6d. pd.)	—	—	—	Aug. 1863
024	North Jane (tin, silver-lead)	2 9 6	1 1/2	1 1/2	Aug. 1864
5000	N. Levant (tin cop.), St. Just	9 3 0	—	—	Sept. 1864
5000	N. Minera (id.) [16000 ad. paid, 5000 12s. 6d. pd.]	—	—	—	Nov. 1864
5000	N. Phoenix (cop.) Llanidloes	4 0 0	1 1/2	1 1/2	May, 1864